When a Book is lent, it should
be read immediately and return'd.

F. 392

Veronica Agrestis	Garden Speedwell
Veronica Chamædrys	Wild Germander
Veronica Serpyllifolia	Little Smooth Speedwell
Anthoxanthum Odoratum	Vernal Grass

F.392

FLORA LONDINENSIS:

OR

PLATES AND DESCRIPTIONS OF SUCH PLANTS

AS GROW WILD IN THE

ENVIRONS of LONDON:

WITH

Their Places of *Growth*, and Times of *Flowering*; their feveral *Names* according to LINNÆUS and other Authors:

WITH

A particular DESCRIPTION of each PLANT in LATIN and ENGLISH.

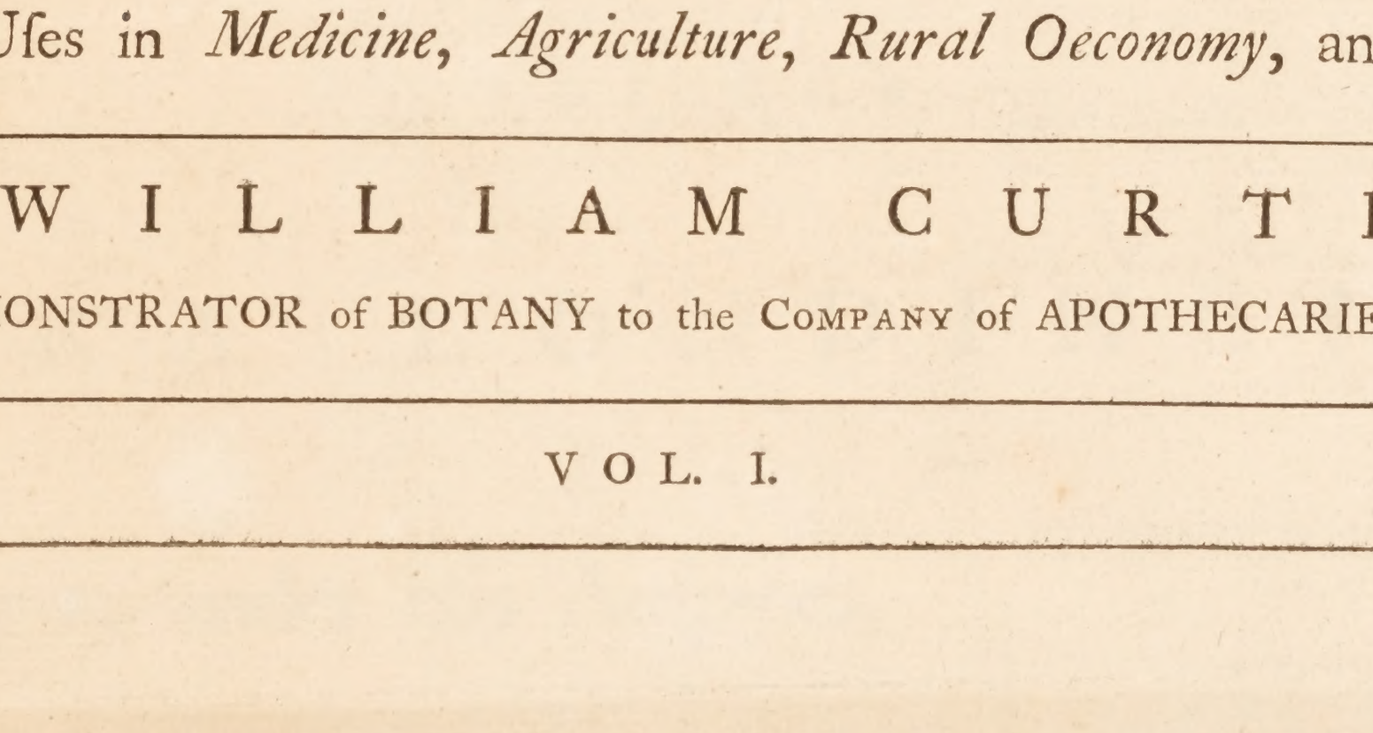
To which are Added,

Their feveral Uſes in *Medicine*, *Agriculture*, *Rural Oeconomy*, and other *Arts*.

By WILLIAM CURTIS,

DEMONSTRATOR of BOTANY to the COMPANY of APOTHECARIES.

VOL. I.



the hand of nature on peculiar minds
imprints a different bias, and to each
degrees its province in the common toil
"with wise intent *"some by the hand*

she leads o'er vales & mountains to explore
what healing virtue swells the tender veins
of herbs & flowers; or what the beams of morn
draw forth, distilling from the diffted rind
in balmy tears".

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MDCCLXXVII.

To the Right Honourable

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Earl of BUTE, &c.

The MÆCENAS of the preſent Age:

This FIRST VOLUME

OF THE

FLORA LONDINENSIS,

Begun under His Auſpices,

And encouraged by His Liberality,

Is, with the ſincereſt Gratitude,

Inſcribed, by

His moſt obliged,

Humble Servant,

W. CURTIS.

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Lady King, Dover-ſtreet, Piccadilly.
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Dr. Knowles, Fenchurch-ſtreet.
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Mr. George Keith, Gracechurch-ſtreet.

L.

John Gideon Loten in Inſulis Zeylano et Celebe olim Gubernator.
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Mr. Lloyd, Temple.
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Mr. Liſcombe.
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M.

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Right Honourable Stewart Mackenzie.
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Mr. James Maddocks, Walworth.
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Mr. Malcomb, Kennington.
Mr. William Myers.
Mr. Moore, Fleet-ſtreet.
Benjamin Mee, Eſq. Fenchurch-ſtreet.
Mr. John Micklem, Uxbridge.
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Dr. Moreton, Britiſh Muſeum.
Hugh Mears, Eſq. Vauxhall.

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Earl of Northington.
———Nevel, Eſq
Mr. Robert Norman, Gracechurch-ſtreet.
Mr. Richard Nairne, Cornhill.
Mr. Edward Newell, Surgeon, Colcheſter.
Rev. Mr. Newbery, Oxford.
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Captain Nairne.

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Major Thomas Pearſon.
Mr. Parker, Fleet-ſtreet.
Rev. Mr. Pierſon, Coxwold.

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Sir John Ruſſell.
Thomas Ruggles, Eſq. Cobham.
Samuel Rudge, Eſq.
Cornelius Rodes, Eſq. Barlborough-Hall.
Dr. Rawlinſon, Watling-ſtreet.
Mr. Samuel Robinſon, St. Thomas Apoſtles, two Sets.
Colonel Ratcliffe.
S. C. Reynardſon, Eſq. Great Ormond-ſtreet.
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Mr. Van Rixtell.

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Sir George Saville, Saville-Houſe, Leiceſter Fields.
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Mr. Francis Upham, Apothecary.

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——— Weddel, Eſq. Upper Brook-ſtreet.
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Mr. William Wavell, Surgeon, Gracechurch-ſtreet.
Reverend Mr. White, Jun. Yarmouth, Norfolk.
Mr. Walter Williams, Attorney, Apothecaries Hall.
Mr. William Williams, Apothecary, Briſtol.

Y.

Dr. Yalden.
William Young, Eſq. Deleford, near Uxbridge.

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Reverend Mr. Davis, Fellow of Merton Colledge, Oxford.
Mr. T. G. Cullum, Surgeon, St. Edmondſbury, Suffolk.
Dr. A. Hunter, York.

This Catalogue is printed more with a view to obtain a compleat one, to be publiſhed in the third Faſciculus, than as one already perfect: the Author is ſenſible that there are many perſons take in this work, whoſe names are not inſerted, and many errors will probably be found in what is here printed: he will gladly receive any information, (poſtage free,) whereby he may inſert ſuch names and rectify ſuch errors.

THE PREFACE.

ALTHOUGH the Author does not here mean to give a Preface at large, reſerving that until the firſt volume, containing thirty-ſix numbers or two hundred and ſixteen plants, ſhall be compleated; yet he preſumes it will be ſatisfactory to his ſubſcribers, and the public, to be informed a little more fully of the nature and deſign of the work; as it will alſo give him an opportunity of anſwering ſome few objections that have been made to the plan of it.

The primary deſign of it then, is to facilitate a knowledge of the plants of our own country, and eſtabliſh each ſpecies and variety on a firm baſis: this the Author conſiders as the grand deſideratum at preſent; this arduous taſk once accompliſhed, a way will be opened, and a foundation laid for numberleſs improvements in Medicine, Agriculture, &c.

To be enabled to do this, he means to take the greateſt pains in the examination of thoſe plants which he figures; to have them drawn from living ſpecimens moſt expreſſive of the general habit or appearance of the plant as it grows wild; to place each plant, as much as is conſiſtent, in the moſt pleaſing point of view; and to be very particular in the delineation and deſcription of the ſeveral parts of the flower and fruit, more eſpecially where they characterize the plant.

And in order that he may obtain a more perfect knowledge of each plant; that he may ſee it in every ſtage of its growth, from the germination to the maturity of its ſeed; that he may compare and contraſt the ſeveral ſpecies together; that he may make experiments to elucidate the nature of ſuch as are obſcure, or bring into more general uſe thoſe which bid fair to be of advantage to the public; he is now cultivating each of them in a garden near the city, into which, by the kind aſſiſtance of his friends, he has already introduced, in the courſe of one year, about five hundred different ſpecies, including ſixty of that moſt valuable tribe of plants the graſſes.

Although the aſcertaining and fixing of the plants will be his principle object, yet to make the work more uſeful to the public, as well as inſtructive and entertaining to the young botaniſt, his utmoſt endeavours will be uſed to lay before them whatever may be found *uſeful* in old botanic writers; and here they muſt not be ſurprized to find many of the numerous and imaginary virtues, which they attributed to almoſt every plant, purpoſely omitted: the diſcoveries made by modern authors, particularly relative to *Agriculture* and *Rural Oeconomy*, will be carefully attended to; as here ſeems to be a field juſt opening to view, from whence the public is likely to draw great and laſting advantages: and as a knowledge of the plants themſelves is firſt neceſſary, and for want of which, indeed, the experimental farmer cannot effectually communicate his improvements, he finds himſelf peculiarly happy in contributing his ſhare to the public good.

He is nevertheleſs ſenſible how inadequate his abilities, or indeed the abilities of any *one* perſon are, to render a work of this kind any ways compleat; he therefore reſpectfully ſolicits the aſſiſtance of thoſe, who wiſh well to the improvement of *Engliſh Botany* and *Engliſh Agriculture:* any information they ſhall be pleaſed to communicate, ſhall with thoſe favours he has already received from divers of his friends, be gratefully acknowledged; and to induce them the more readily to communicate, he has ſubjoined a catalogue of thoſe plants which (with many others) are already drawn, and which he intends ſhall form the next Faſciculus.

He is ſorry it has not been in his power to publiſh his numbers ſo faſt as was originally propoſed: the delay has chiefly been occaſioned by the loſs of one of his principal artiſts, whoſe place is now ſupplied by two others equally eminent; ſo that the drawing and engraving, which before fell to the ſhare of one perſon, being now divided betwixt two, he flatters himſelf he ſhall be able to publiſh a number once a month, or ſix weeks at fartheſt—he is however determined never to ſacrifice the accuracy or utility of the work to hurry—on this principle he has been at the expence of having ſome of his plates engraven twice, and even three times over before he could venture to publiſh them. As the delay has originated from this ſource, he hopes none of his ſubſcribers that have hitherto ſo generouſly contributed to the carrying on of the work, will withdraw that aſſiſtance, which alone can enable him to proſecute it with advantage to the public, credit to himſelf, and ſatisfaction to them.

It now remains to obviate ſome few objections which have been made to the plan of this work; and firſt, it has been ſuggeſted to the Author, that it would have been better received, if, inſtead of purſuing the preſent plan, he had publiſhed thoſe plants only which were not figured in the *Flora Danica*, a work now carrying on in *Denmark* under the auſpices of the *King:* but a few moments reflection, muſt he preſumes be ſufficient, to convince every unprejudiced perſon, how inadequate ſuch a partial publication would have been to the making a knowledge of the plants of our country more general among ourſelves—at beſt ſuch a work could only anſwer the purpoſe of thoſe few individuals who are in poſſeſſion of that part of the *Flora Danica* already publiſhed; and as that is ſtill going on, there is no doubt but the ſame plants would be publiſhed by both Authors; thus, the *Butomus umbellatus*, *Solanum Dulcamara*, and *Ervum hirſutum*, have been publiſhed in the *Flora Danica* ſince they were publiſhed in the *Flora Londinenſis*, ſo that in the end even thoſe perſons would be obliged to purchaſe duplicates of the ſame plant.

Another reaſon why the Author could not adopt the plan propoſed to him, was the limited ſcale of the *Flora Danica*, which contains the figures and names of the plants only, but gives us no account of their properties, nor teaches us how to diſtinguiſh the difficult plants from one another; the plates likewiſe being *ſmall folio*, cannot admit many of the plants of their natural ſize, ſeveral of the graſſes for inſtance, as the *Feſtuca fluitans* and *Aira aquatica* are obliged to be ſo cut and diminiſhed as ſcarcely to be known. Many other objections might be urged without any view to depreciate a work which, though not ſo compleat in ſome reſpects as could be wiſhed, has exceeding great merit:—but theſe will probably be deemed ſufficient.

The

The engraving of one plant only on each plate has been another objection which ſome have ſtrongly urged, while others have in as warm terms teſtified their approbation of it. It may be proper to mention, that whether one or more had been engraven on a plate, the difference in the expence would have been trifling, and chiefly in the paper: as they now are, each is diſtinct, and every one is at liberty to place them according to that ſyſtem which he moſt approves of.

The want of figures of reference to the plates, or letter-preſs, has been perhaps a more ſolid objection; but the Author hopes, that by the uſe of the indexes deſcribed below, this alſo will be obviated.

Having now, ſo far as he can recollect, anſwered every thing deſerving the name of an objection, he willingly ſubmits his performance to the judgment of a candid and impartial public; conſcious of having uſed his beſt endeavours to be ſerviceable in his department.

Uſes of the *Indexes*, with *Directions* for *Binding*.

In the firſt Index the plants are placed according to the Syſtem of LINNÆUS, with which it is preſumed, the greateſt part of his ſubſcribers are beſt acquainted. To find out any plant, even though the perſon be not acquainted with this mode of arrangement, look in the alphabetical Engliſh or Latin Index, and you will find the figures correſponding with them as placed in the book: if for example I want to find Ivy, I look for it in Index, No. 3, where the Engliſh names are alphabetically arranged, and find it to be the 16 plate, as there are 72 plates in each Faſciculus, I can readily gueſs within a few plates where it is placed: to thoſe who have been accuſtomed to look out plants in LINNÆUS's works it will come eaſier; but if each ſubſcriber will take the ſmall pains of figuring the plates with a black lead pencil, any plant may then be immediately referred to. The Author could not hit on any mode more eligible, conſiſtent with the irregular order in which he has been obliged to publiſh his plants.

With every third Faſciculus will be given a general and more copious Index, with a Gloſſary of the technical terms uſed in the work.

He would recommend to his ſubſcribers, that each Faſciculus containing twelve numbers, be *bound in boards, and not cut at the edges*; *the plates to be placed in the ſame order in which they occur in the firſt Index*; taking care that each plate be put oppoſite to the letter-preſs belonging to it, with a leaf of thin paper betwixt them. If any ſhould be at a loſs to have them properly done, they will be pleaſed to ſend them to *Raham Reepe's*, Bookbinder, in Crooked-Lane, near the Monument, who binds the Author's.

N. B. It may be neceſſary to caution the Bookbinder againſt beating the Numbers, as that operation would probably deſtroy the beauty of the plates.

Catalogue of thoſe Plants which are *intended* to be Publiſhed in the next *Faſciculus*.

Anemone nemoroſa
Adoxa moſchatellina
Ajuga reptans
Aira præcox
Arabis thaliana
Arenaria tenuifolia
Achillæa Ptarmica
Briza media
Corylus avellana
Chærophyllum ſylveſtre
Convolvulus arvenſis
Circæa lutetiana
Chenopodium Vulvaria
Dipſacus ſylveſtris
Epilobium anguſtifolium
Epilobium ramoſum
Erica cinerea
Fumaria officinalis
Feſtuca duriuſcula
Feſtuca myuros
Glechoma hederacea
Geranium molle
Geranium rotundifolium
Geranium perenne
Geranium Columbinum
Hyacinthus non ſcriptus
Hyoſcyamus niger
Hypericum montanum
Hypericum quadrangulum
Hypericum hirſutum
Ilex Aquifolium
Iris Pſeudacorus
Lamium amplexicaule
Lyſimachia nemorum
Lyſimachia nummularia
Lyſimachia tenella
Lyſimachia vulgaris
Liguſtrum vulgare
Lotus corniculata
Myoſurus minimus
Malva officinalis
Malva minor
Medicago lupulina
Oſmunda ſpicant
Oxalis acetoſella
Orchis Morio
Ornithopus perpuſillus
Plantago lanceolata
Plantago major
Plantago Coronopus
Plantago media
Poa rigida
Poa compreſſa
Polygonum amphibium
Polytrichum commune
Ranunculus hirſutus
Ranunculus Ficaria
Sagina erecta
Saxifraga tridactylites
Spergula nodoſa
Sedum daſyphyllum
Sedum reflexum
Symphytum officinale
Sparganium erectum
Tuſſilago farfara
Tormentilla erecta
Thymus ſerpyllum
Trifolium fragiferum
Valeriana dioica
Veronica officinalis
Veronica hederifolia
Veronica arvenſis

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43 Hedera Helix — — — — 1
58 Hyacinthus non ſcriptus — — 2
160 Hypericum pulchrum — — — 1
161 —— perforatum — — — 1
162 —— hirſutum — — — 3
163 —— humifuſum — — — 3
164 —— Androſæmum — — — 3
168 Hypochæris radicata — — — 3
169 —— glabra — — — — 3
195 Hydrocharis Morſus Ranæ — — 3
208 Hypnum proliferum — — — 1
209 —— ſericeum — — — 2
210 —— purum — — — — 3
217 Hydnum auriſcalpium — — — 3
11 Iris Pſeudacorus — — — 3
59 Juncus campeſtris — — — 2
178 Inula dyſenterica — — — 3
179 —— pulicaria — — — 3
8 Lycopus europæus — — — 3
42 Lonicera Periclymenum — — 3
45 Lyſimachia Nummularia — — 3
56 Linum catharticum — — — 1
90 Lychnis dioica — — — 2
91 —— Flos cuculi — — — 1
97 Lythrum Salicaria — — — 3
116 Lamium purpureum — — — 1
117 —— amplexicaule — — — 2
118 —— album — — — 2
156 Lotus corniculatus — — 2
159 Lathyrus pratenſis — — — 3
165 Leontodon Taraxacum — — — 1
166 Lapſana communis — — — 1
25 Montia fontana — — — 3
44 Myoſotis ſcorpioides — — — 3
145 Malva ſylveſtris — — — 2
146 —— rotundifolia — — — 3
157 Medicago lupulina — — — 2
158 —— arabica — — — 3
194 Mercurialis perennis — — — 2
89 Oxalis Acetoſella — — — 2
148 Orobus tuberoſus — — — 1
185 Ophrys apifera — — — — 1
186 —— ovata — — — — 3
187 Orchis maſcula — — — — 2
188 —— Morio — — — — 3
199 Oſmunda ſpicant — — — 2
14 Poa annua — — — — 1
15 —— rigida — — — — 2
16 —— pratenſis — — — 2
17 —— trivialis — — — 2
29 Plantago lanceolata — — — 2
30 —— major — — — 2
102 Potentilla reptans — — — 1
103 —— Anſerina — — — 3
191 Poterium Sanguiſorba — — 2
198 Polypodium vulgare — — — 1
71 Polygonum Biſtorta — — — 1
72 —— Perſicaria — — — 1
73 —— penſylvanicum — — — 1
74 —— var: caul: macul: — — 1
75 —— Hydropiper — — — 1
76 —— aviculare — — — 1
77 —— minus — — — — 1
211 Polytrichum ſubrotundum — — 2
218 Phallus impudicus — — — 3
105 Papaver Rhœas — — — 3
172 Picris echioides — — — — 3
60 Rumex criſpus — — — — 1

11 Flag yellow — — — 3
178 Fleabane common — — — 3
179 —— ſmall — — — — 3
174 Groundſel common — — — 1
83 Golden Saxifrage common — — 2
122 Ground-Ivy — — — — 2
50 Gooſefoot white — — — — 2
51 —— purple-jointed — — — 2
53 Good King Henry — — — 3
197 Harts-tongue — — — 1
47 Hemlock — — — — 1
69 Heath croſs-leav'd — — — 1
70 —— fine-leav'd — — — 2
35 Hottonia water — — — — 1
208 Hypnum proliferous — — — 1
209 —— ſilky — — — — 2
210 —— meadow — — — — 3
42 Honeyſuckle common — — — 1
117 Henbit — — — — 2
58 Hyacinth Engliſh — — — 2
168 Hawkweed long rooted — — — 3
169 —— ſmall flowered — — 3
215 Hydnum ear-picker — — — 3
100 Houſeleek — — — — 3
13 Hair-graſs early — — — — 3
170 Hemp-Agrimony Water — — 3
126 Hooded willow-herb common — — 3
43 Ivy — — — — — 1
76 Knot-graſs common — — — 1
139 Ladies-ſmock common — — — 3
138 —— bitter — — — 3
97 Looſeſtrife purple-ſpiked — — 3
96 Mouſear-chickweed marſh — — 2
93 —— leaſt — — — 2
95 —— common — — — 2
94 —— broad-leav'd — — — 2
114 Marſh-Marygold — — — 1
78 Moſchatel tuberous — — — 2
157 Medick hop — — — — 2
15 Meadow-graſs hard — — — 2
16 —— ſmooth-ſtalk'd — — — 2
17 —— rough-ſtalk'd — — — 2
194 Mercury Dogs — — — — 2
145 Mallow common — — — 2
146 —— round-leav'd — — — 3
213 Muſhroom Egg — — — 2
212 —— pucker'd — — — 2
214 —— ſlimy — — — 3
215 —— plaited — — — — 3
216 —— oyſter — — — 3
45 Moneywort — — — — 3
44 Mouſear-ſcorpion-graſs — — — 3
218 Morell ſtinking — — — 3
166 Nipplewort — — — — 1
40 Nightſhade woody — — — 1
41 —— garden — — — — 2
124 Nettle hedge — — — — 3
185 Orchis Bee — — — — 1
187 —— early ſpotted — — — 2
188 —— meadow — — — 3
196 Orach ſpear-leav'd — — — 2
88 Orpine — — — — 3
23 Oat-graſs yellow — — — 3
24 —— tall — — — 3
172 Oxtongue — — — — 3
36 Pimpernel common — — — 1
37 —— bog — — — — 3
32 —— baſtard — — — 3
91 Pink meadow — — — — 1
148 Pea wood — — — — 1
14 Poa common dwarf — — — 1
72 Perſicaria ſpotted leav'd — — 1
73 —— pale flowered — — — 1
74 —— ſpotted ſtalk'd — — — 1
75 —— biting — — — — 1
77 —— ſmall creeping — — — 1
198 Polypody common — — — 1
183 Panſie wild — — — — 1
34 Pearlwort upright — — — 2
33 —— procumbent — — — 3
106 Pheaſants-eye — — — 2
136 Podded Mouſear — — — 2
110 Pilewort — — — — 2
29 Plantain narrow-leav'd — — — 2
30 —— common — — — 2
211 Polytrichum dwarf — — — 2
105 Poppy ſmooth-round-headed — — 3
46 Periwinkle ſmall — — — 3
—— obtuſifolium

61 —— obtuſifolium — — — 3
62 —— acutus — — — 3
63 —— maritimus — — — 3
107 Ranunculus bulboſus — — — 1
108 —— hirſutus — — — 2
109 —— acris — — — — 1
110 —— Ficaria — — — 2
111 —— auricomus — — — 2
112 —— ſceleratus — — — 2
31 Scabioſa ſucciſa — — — 3
33 Sagina procumbens — — — 3
34 —— erecta — — — — 2
40 Solanum Dulcamara — — — 1
41 —— nigrum — — — 2
49 Scandix Anthriſcus — — — 1
55 Sambucus Ebulus — — — 3
80 Saxifraga granulata — — — 1
81 —— tridactylites — — — 2
84 Stellaria Holoſtea — — — 2
82 Saponaria officinalis — — — 2
85 Sedum album — — — 2
86 —— acre — — — — 1
87 —— daſyphyllum — — — 3
88 —— Telephium — — — 3
100 Sempervivum tectorum — — 3
124 Stachys ſylvatica — — — 3
125 —— paluſtris — — — 3
126 Scutellaria galericulata — — — 3
140 Siſymbrium ſylveſtre — — — 3
167 Sonchus oleraceus — — — 2
174 Senecio vulgaris — — — 1
119 Thymus Acinos — — — 1
120 —— Serpyllum — — — 2
134 Thlaſpi Burſa-paſtoris — — — 1
151 Trifolium ornithopodioides — — 2
152 —— ſubterraneum — — 2
153 —— fragiferum — — — 2
154 —— agrarium — — — 3
155 —— repens — — — 3
176 Tuſſilago Petaſites — — — 2
177 —— Farfara — — — 2
192 Typha major — — — — 3
193 —— minor — — — 3
1 Veronica agreſtis — — — 1
2 —— chamædrys — — — 1
3 —— ſerpyllifolia — — — 1
4 —— hederifolia — — — 2
5 —— arvenſis — — — 2
6 —— Becabunga — — — 2
7 —— officinalis — — — 1
46 Vinca minor — — — 3
115 Verbena officinalis — — 1
180 Viola odorata — — — 1
181 —— hirta — — — 1
182 —— canina — — — 2
183 —— tricolor — — — 1
184 —— paluſtris — — — 3

59 Ruſh hairy field — — — 2
137 Rocket ſtinking — — — 3
140 —— water — — — 3
98 Spurge ſmall garden — — — 1
99 —— ſun — — — — 1
160 St. John's-wort ſmall upright — — 1
161 —— common — — — 1
162 —— hairy — — — — 3
163 —— trailing — — — 3
49 Scandix rough-ſeeded — — 1
80 Saxifrage white — — — 1
81 —— rue-leav'd — — — 2
85 Stonecrop white-flowered — — 1
86 —— common yellow — — 1
87 —— thick-leav'd — — 3
134 Shepherds-purſe — — — 1
1 Speedwell procumbent garden — — 1
2 —— germander-leav'd — — 1
3 —— ſmooth-leav'd — — 1
4 —— ivy-leav'd — — — 2
5 —— wall — — — 2
7 —— male — — — 3
167 Sowthiſtle common — — — 2
199 Spleenwort rough — — 2
135 Sauce-alone — — — 2
84 Stitchwort greater — — — 2
82 Sopewort — — — 2
101 Strawberry barren — — 3
103 Silver-weed — — — — 3
149 Tine-tare rough-podded — — — 1
150 —— ſmooth podded — — 1
26 Teaſle ſmall — — — — 1
27 —— wild — — — 3
130 Toadflax common yellow — — 1
119 Thyme Baſil — — — 1
120 —— wild — — — 2
152 Trefoil ſubterraneous — — 2
151 —— birds-foot true — — — 2
153 —— Strawberry — — 2
154 —— hop — — — 3
186 Twayblade — — — 3
171 Thiſtle milk — — — 3
164 Tutſan — — — 3
10 Vernal-graſs ſweet-ſcented — — 1
115 Vervain — — — 1
180 Violet ſweet-ſcented — — 1
181 —— hairy — — — 1
182 —— Dogs — — — — 1
184 —— Bog - - - - 3
159 Vetchling yellow - - - - 3
89 Wood ſorrel - - - - 2
64 Willow-herb large-flowered - - 2
65 —— hoary - - - - 2
66 —— ſquare-ſtalk'd - - - 2
67 —— roſebay - - - - 2
68 —— wood - - - - 3
8 Water-horehound - - - - 3

General INDEX to the Plants of the Firſt, Second, and Third *Faſciculi*, as arranged according to the Syſtem of LINNÆUS.

Plate

DIANDRIA MONOGYNIA.

1 Veronica agreſtis
2 —— Chamædrys
3 —— ſerpyllifolia
4 —— hederifolia
5 —— arvenſis
6 —— Becabunga
7 —— officinalis
8 Lycopus europæus
9 Circæa lutetiana

Plate

DIANDRIA DIGYNIA.

10 Anthoxanthum odoratum

TRIANDRIA MONOGYNIA.

11 Iris Pſeudacorus

TRIANDRIA DIGYNIA.

12 Aira aquatica
13 —— præcox

Plate

14 Poa annua
15 —— rigida
16 —— pratenſis
17 —— trivialis
18 Feſtuca fluitans
19 Bromus mollis
20 —— ſterilis
21 —— hirſutus
22 Alopecurus myoſuroides
23 Avena flaveſcens
24 Avena elatior

Plate

TRIANDRIA TRIGYNIA.

25 Montia fontana

TETRANDRIA MONOGYNIA.

26 Dipſacus piloſus
27 ——— ſylveſtris
28 Galium Aparine
29 Plantago lanceolata
30 ——— major
31 Scabioſa Succiſa
32 Centunculus minimus

TETRANDRIA TETRAGYNIA.

33 Sagina procumbens
34 —— erecta

PENTANDRIA MONOGYNIA.

35 Hottonia paluſtris
36 Anagallis arvenſis
37 ——— tenella
38 Convolvulus ſepium
39 ——————— arvenſis
40 Solanum Dulcamara
41 ——— nigrum
42 Lonicera Periclymenum
43 Hedera Helix
44 Myoſotis ſcorpioides paluſt.
45 Lyſimachia Nummularia
46 Vinca minor

PENTANDRIA DIGYNIA.

47 Conium maculatum
48 Æthuſa Cynapium
49 Scandix Anthriſcus
50 Chenopodium album
51 ——————— viride
52 ——————— polyſpermum
53 ——————— Bonus Henricus

PENTANDRIA TRIGYNIA.

54 Alſine media
55 Sambucus Ebulus

PENTANDRIA PENTAGYNIA.

56 Linum catharticum

HEXANDRIA MONOGYNIA.

57 Fritillaria Meleagris
58 Hyacinthus nonſcriptus
59 Juncus campeſtris

HEXANDRIA TRIGYNIA.

60 Rumex criſpus
61 ——— obtuſifolium
62 ——— acutus
63 ——— maritimus

OCTANDRIA MONOGYNIA.

64 Epilobium hirſutum
65 ——————— villoſum
66 ——————— tetragonum
67 ——————— anguſtifolium
68 ——————— montanum
69 Erica tetralix
70 —— cinerea

OCTANDRIA DIGYNIA.

71 Polygonum Biſtorta
72 ——————— Perſicaria
73 ——————— penſylvanicum
74 ——————— var. caule maculato
75 ——— Hydropiper
76 ——— aviculare
77 —— minus

OCTANDRIA TETRAGYNIA.

78 Adoxa Moſchatellina

ENNEANDRIA HEXAGYNIA.

79 Butomus umbellatus

DECANDRIA DIGYNIA.

80 Saxifraga granulata
81 ——————— tridactylites
82 Saponaria officinalis
83 Chryſoſplenium oppoſitifolium

DECANDRIA TRIGYNIA.

84 Stellaria Holoſtea

DECANDRIA PENTAGYNIA.

85 Sedum album
86 ——— acre
87 ——— daſyphyllum

Plate

88 ——— Telephium
89 Oxalis Acetoſella
90 Lychnis dioica
91 ——————— Flos cuculi
92 Agroſtema Githago
93 Ceraſtium ſemidecandrium
94 ——————— viſcoſum
95 ——————— vulgatum
96 ——————— aquaticum

DODECANDRIA MONOGYNIA.

97 Lythrum Salicaria

DODECANDRIA TRIGYNIA.

98 Euphorbia peplus
99 ——————— Helioſcopia

DODECANDRIA DODECAGYNIA.

100 Sempervivum tectorum

ICOSANDRIA POLYGYNIA.

101 Fragaria ſterilis
102 Potentilla reptans
103 ——————— Anſerina
104 Geum urbanum

POLYANDRIA MONOGYNIA.

105 Papaver Rhœas

POLYANDRIA POLYGYNIA.

106 Adonis autumnalis
107 Ranunculus bulboſus
108 ——————— hirſutus
109 ——————— acris
110 ——————— Ficaria
111 ——————— auricomus
112 ——————— ſceleratus
113 Anemone nemoroſa
114 Caltha paluſtris

DIDYNAMIA GYMNOSPERMIA.

115 Verbena officinalis
116 Lamium purpureum
117 ——————— amplexicaule
118 ——————— album
119 Thymus Acinos
120 ——————— Serpyllum
121 Ajuga reptans
122 Glechoma hederacea
123 Betonica officinalis
124 Stachys ſylvatica
125 ——— paluſtris
126 Scutellaria galericulata

DIDYNAMIA ANGIOSPERMIA.

127 Euphraſia Odontites
128 Antirrhinum Cymbalaria
129 ——————— Elatine
130 ——————— Linaria
131 ——————— ſpurium
132 Digitalis purpurea

TETRADYNAMIA SILICULOSA.

133 Draba verna
134 Thlaſpi Burſa paſtoris

TETRADYNAMIA SILIQUOSA.

135 Eryſimum Alliaria
136 Arabis thaliana
137 Braſſica muralis
138 Cardamine amara
139 ——————— pratenſis
140 Siſymbrium ſylveſtre

MONADELPHIA DECANDRIA.

141 Geranium cicutarium
142 ——————— robertianum
143 ——————— molle
144 ——————— pyrenaicum

MONADELPHIA POLYANDRIA.

145 Malva ſylveſtris
146 ——— rotundifolia

DIADELPHIA HEXANDRIA.

147 Fumaria officinalis

DIADELPHIA DECANDRIA.

148 Orobus tuberoſus
149 Ervum hirſutum
150 ——————— tetraſpermum
151 Trifolium ornithopodioides
152 ——————— ſubterraneum
153 ——————— fragiferum

Plate

154 ——————— agrarium
155 ——————— repens
156 Lotus corniculatus
157 Medicago lupulina
158 ——————— arabica
159 Lathyrus pratenſis

POLYADELPHIA POLYANDRIA.

160 Hypericum pulchrum
161 ——————— perforatum
162 ——————— hirſutum
163 ——————— humifuſum
164 ——————— Androſæmum

SYNGENESIA POLYGAMIA ÆQUALIS.

165 Leontodon Taraxacum
166 Lapſana communis
167 Sonchus oleraceus
168 Hypochæris radicata
169 ——————— glabra
170 Bidens cernua
171 Carduus marianus
172 Picris echioides

SYNGENESIA POLYGAMIA SUPERFLUA.

173 Erigeron acre
174 Senecio vulgaris
175 Bellis perennis
176 Tuſſilago Petaſites
177 ——————— Farfara
178 Inula dyſenterica
179 —— pulicaria

SYNGENESIA MONOGAMIA.

180 Viola odorata
181 —— hirta
182 —— canina
183 —— tricolor
184 —— paluſtris

GYNANDRIA DIANDRIA.

185 Ophrys apifera
186 ——————— ovata
187 Orchis maſcula
188 ——— Morio

GYNANDRIA POLYANDRIA.

189 Arum maculatum

MONOECIA TRIANDRIA.

190 Carex pendula

MONOECIA POLYANDRIA.

191 Poterium Sanguiſorba
192 Typha latifolia
193 ——— anguſtifolia

DIOECIA ENNEANDRIA.

194 Mercurialis perennis

DIOECIA MONADELPHIA.

195 Hydrocharis Morſus Ranæ

POLYGAMIA MONOECIA.

196 Atriplex haſtata

CRYPTOGAMIA FILICES.

197 Aſplenium Scolopendrium
198 Polypodium vulgare
199 Oſmunda ſpicant

CRYPTOGAMIA MUSCI.

200 Bryum ſcoparium
201 ——————— undulatum
202 ——————— hornum
203 ——————— truncatulum
204 ——————— viridulum
205 ——————— ſubulatum
206 Bryum argenteum
207 —— ceſpititium
208 Hypnum proliferum
209 ——————— ſericeum
210 ——————— purum
211 Polytrichum ſubrotundum

CRYPTOGAMIA FUNGI.

212 Agaricus ovatus
213 ——————— fimetarius
214 ——————— glutinoſus
215 ——————— plicatilis
216 ——————— oſtreatus
217 Hydnum auriſcalpium
218 Phallus impudicus

INDEX I.

In which the Plants contained in the firſt Faſciculus are arranged according to the Syſtem of LINNÆUS.

	Latin Name.	*Claſs and Order.*
1	Veronica agreſtis	DIANDRIA *Monogynia.*
2	Veronica Chamædrys	
3	Veronica ſerpyllifolia	
4	Anthoxanthum odoratum	DIANDRIA *Digynia.*
5	Aira aquatica	TRIANDRIA *Digynia.*
6	Poa annua	
7	Feſtuca fluitans	
8	Bromus mollis	
9	Bromus ſterilis	
10	Dipſacus piloſus	TETRANDRIA *Monogynia.*
11	Hottonia paluſtris	PENTANDRIA *Monogynia.*
12	Anagallis arvenſis	
13	Convolvulus ſepium	
14	Solanum Dulcamara	
15	Lonicera Periclymenum	
16	Hedera Helix	
17	Conium maculatum	PENTANDRIA *Digynia.*
18	Æthuſa Cynapium	
19	Scandix Anthriſcus	
20	Alſine media	PENTANDRIA *Trigynia.*
21	Erica tetralix	OCTANDRIA *Monogynia.*
22	Polygonum Biſtorta	OCTANDRIA *Digynia aut Trigynia.*
23	Polygonum Perſicaria	
24	Polygonum Penſylvanicum	
25	Polygonum var. caule maculato	
26	Polygonum Hydropiper	
27	Polygonum aviculare	
28	Polygonum minus	
29	Butomus umbellatus	ENNEANDRIA *Hexagynia.*
30	Saxifraga granulata	DECANDRIA *Digynia.*
31	Sedum album	DECANDRIA *Pentagynia.*
32	Sedum acre	
33	Lychnis Flos Cuculi	DECANDRIA *Pentagynia.*
34	Ceraſtium aquaticum	
35	Euphorbia peplus	DODECANDRIA *Trigynia.*
36	Euphorbia Helioſcopia	
37	Potentilla reptans	ICOSANDRIA *Polygynia.*
38	Ranunculus bulboſus	POLYANDRIA *Polygynia.*
39	Ranunculus acris	
40	Caltha paluſtris	
41	Verbena officinalis	DIDYNAMIA *Gymnoſpermia.*
42	Lamium rubrum	
43	Thymus acinos	
44	Euphraſia Odontites	DIDYNAMIA *Angioſpermia.*
45	Antirrhinum Cymbalaria	
46	Antirrhinum Elatine	
47	Antirrhinum Linaria	
48	Digitalis purpurea	
49	Draba verna	TETRADYNAMIA *Siliculoſa.*
50	Thlaſpi Burſa Paſtoris	
51	Geranium Cicutarium	MONADELPHIA *Decandria.*
52	Geranium robertianum	
53	Orobus tuberoſus	DIADELPAIA *Decandria.*
54	Ervum hirſutum	
55	Ervum tetraſpermum	
56	Hypericum pulchrum	POLYADELPHIA *Polyandria.*
57	Hypericum perforatum	
58	Leontodon Taraxacum	SYNGENESIA *Polygamia Æqualis.*
59	Lapſana communis	
60	Erigeron acre	SYNGENESIA *Polygamia Superflua.*
61	Senecio vulgaris	
62	Bellis perennis	
63	Viola odorata	SYNGENESIA *Monogamia.*
64	Viola hirta	
65	Viola tricolor	
66	Ophrys Apifera	GYNANDRIA *Diandria.*
67	Aſplenium Scolopendrium	CRYPTOGAMIA *Filices.*
68	Polypodium vulgare	
69	Bryum ſcoparium	CRYPTOGAMIA *Muſci.*
70	Bryum undulatum	
71	Bryum hornum	
72	Hypnum proliferum	

INDEX II.

In which the Latin Names of the Plants are arranged Alphabetically.

	Plate.
Anthoxanthum odoratum	4
Aira aquatica	5
Anagallis arvenſis	12
Alſine media	20
Antirrhinum Cymbalaria	45
Antirrhinum Elatine	46
Antirrhinum Linaria	47
Aſplenium Scolopendrium	67
Æthuſa Cynapium	18
Bromus mollis	8
Bromus ſterilis	9
Butomus umbellatus	29
Bellis perennis	62
Bryum ſcoparium	69
Bryum undulatum	70
Bryum hornum	71
Convolvulus Sepium	13
Conium maculatum	17
Ceraſtium aquaticum	34
Caltha paluſtris	40
Draba verna	49
Digitalis purpurea	48
Dipſacus piloſus	10
Erica tetralix	21
Euphorbia Peplus	35
Euphorbia Helioſcopia	36
Euphraſia Odontites	44
Ervum hirſutum	54
Ervum tetraſpermum	55
Erigeron acre	60
Feſtuca fluitans	7
Geranium cicutarium	51
Geranium robertianum	52
Hottonia paluſtris	11
Hedera Helix	16
Hypericum pulchrum	56
Hypericum perforatum	57
Hypnum proliferum	72
Lonicera Periclymenum	15
Lychnis Flos Cuculi	33
Lamium rubrum	42
Leontodon Taraxacum	58
Lapſana communis	59
Orobus tuberoſus	53
Ophrys apifera	66
Poa annua	6
Polygonum Biſtorta	22
Polygonum Perſicaria	23
Polygonum Penſylvanicum	24
Polygonum var. caule maculato	25
Polygonum Hydropiper	26
Polygonum aviculare	27
Polygonum minus	28
Potentilla reptans	37
Polypodium vulgare	68
Ranunculus bulboſus	38
Ranunculus acris	39
Solanum Dulcamara	14
Scandix Anthriſcus	19
Saxifraga granulata	30
Sedum album	31
Sedum acre	32
Senecio vulgaris	61
Thymus acinos	43
Thlaſpi Burſa Paſtoris	50
Veronica agreſtis	1
Veronica Chamædrys	2
Veronica ſerpyllifolia	3
Verbena officinalis	41
Viola odorata	63
Viola hirta	64
Viola tricolor	65

INDEX III.

In which the Engliſh Names of the Plants are arranged Alphabetically.

	Plate.
Aira ſweet taſted water	5
Brome-Grass ſoft	8
Brome-Grass barren	9
Bryum broom	69
Bryum curled	70
Bryum ſwan's-neck	71
Bistort common	22
Crane's-bill hemlock-leaved	51
Crane's-bill ſtinking or herb Robert	52
Cymbalaria Ivy-leaved	45
Chickweed common	20
Convolvulus large white	13
Cinquefoil common	37
Crowfoot round-rooted	38
Crowfoot upright meadow	39
Daisy, common,	62
Draba, vernal,	49
Dead-Nettle purple	42
Dandelion common	58
Eyebright red	44
Erigeron purple	60
Flowering-Rush	29
Fools-Parsley	18
Fluellin ſharp-pointed	46
Foxglove purple	48
Feſcue-Grass flote	7
Groundsell common	61
Harts-tongue	67
Hemlock	17
Heath croſs-leaved	21
Hottonia water	11
Hypnum proliferous	72
Honeysuckle common	15
Ivy	16
Knot-grass common	27
Mousear-Chickweed marſh	34
Marsh-Marigold	40
Nipplewort common	59
Nightshade woody	14
Orchis Bee	66
Pimpernel common	12
Pink meadow	33
Pea wood	53
Poa common dwarf	6
Persicaria ſpotted leaved	23
Persicaria pale flowered	24
Persicaria ſpotted ſtalk'd	25
Persicaria biting	26
Persicaria ſmall creeping	28
Polypody common	68
Pansie wild	65
Spurge ſmall garden	35
Spurge ſun	36
St. John's-Wort ſmall upright	56
St. John's-Wort common	57
Scandix rough-ſeeded	19
Saxifrage white	30
Stonecrop white flowered	31
Stonecrop common yellow	32
Shepherds-Purse	50
Speedwell procumbent garden	1
Speedwell germander-leaved	2
Speedwell ſmooth-leaved	3
Tine-tare rough podded	54
Tine-tare ſmooth podded	55
Teasel ſmall	10
Toad flax common yellow	47
Thyme baſil	43
Vernal-Grass ſweet-ſcented	4
Vervain	41
Violet ſweet-ſcented	63
Violet hairy	94

INDEX I.

In which the Plants contained in the ſecond Faſciculus, are arranged according to the Syſtem of LINNÆUS.

	Latin Name.	*Claſs and Order.*
1	Veronica hedæriſolia	DIANDRIA *Monogynia.*
2	Veronica arvenſis	
3	Veronica Becabunga	
4	Poa rigida	TRIANDRIA *Monogynia.*
5	Poa pratenſis	
6	Poa trivialis	
7	Alopecurus myoſuroides	
8	Bromus hirſutus	
9	Galium Aparine	TETRANDRIA *Monogynia.*
10	Plantago lanceolata	
11	Plantago major	
12	Sagina erecta	TETRANDRIA *Tetragynia.*
13	Convolvulus arvenſis	PENTANDRIA *Monogynia.*
14	Solanum nigrum	
15	Chenopodium album	PENTANDRIA *Digynia.*
16	Chenopodium viride	
17	Chenopodium polyſpermum	
18	Hyacinthus non ſcriptus	HEXANDRIA *Monogynia.*
19	Juncus campeſtris	
20	Rumex criſpus	HEXANDRIA *Trigynia.*
21	Epilobium hirſutum	OCTANDRIA *Monogynia.*
22	Epilobium villoſum	
23	Epilobium tetragonum	
24	Epilobium anguſtifolium	
25	Erica cinerea	
26	Adoxa Moſchatellina	OCTANDRIA *Tetragynia.*
27	Chryſoſplenium oppoſitifolium	DECANDRIA *Digynia.*
28	Saxifraga trydactylites	
29	Saponaria officinalis	
30	Stellaria Holoſtea	DECANDRIA *Trigynia.*
31	Oxalis Acetoſella	ENNEANDRIA *Pentagynia.*
32	Lychnis dioica	
33	Ceraſtium ſemidecandrum	
34	Ceraſtium vulgatum	
35	Ceraſtium viſcoſum	
36	Geum urbanum	ICOSANDRIA *Polygynia.*
37	Adonis autumnalis	POLYANDRIA *Polygynia.*
38	Anemone nemoroſa	
39	Ranunculus Ficaria	
40	Ranunculus hirſutus	
41	Ranunculus auricomus	
42	Ranunculus ſceleratus	
43	Ajuga reptans	DIDYNAMIA *Gymnoſpermia.*
44	Glechoma hederacea	
45	Lamium album	
46	Lamium amplexicaule	
47	Thymus Serpyllum	
48	Eryſimum Alliaria	TETRADYNAMIA *Siliquoſa.*
49	Arabis thaliana	
50	Geranium molle	MONADELPHIA *Decandria.*
51	Malva ſylveſtris	MONADELPHIA *Polyandria.*
52	Fumaria officinalis	DIADELPHIA *Hexandria.*
53	Trifolium ornithopodioides	DIADELPHIA *Decandria.*
54	Trifolium ſubterraneum	
55	Trifolium fragiferum	
56	Lotus corniculatus	
57	Medicago lupulina	
58	Sonchus oleraceus	SYNGENESIA *Polygamia Æqualis.*
59	Tuſſilago Petaſites	SYNGENESIA *Polygamia Superflua.*
60	Tuſſilago Farfara	
61	Viola canina	SYNGENESIA *Monogamia.*
62	Orchis maſcula	GYNANDRIA *Diandria.*
63	Arum maculatum	GYNANDRIA *Polyandria.*
64	Poterium Sanguiſorba	MONOECIA *Polyandria.*
65	Mercurialis perennis	DIOECIA *Enneandria.*
66	Atriplex haſtata	POLYGAMIA *Monoecia.*
67	Oſmunda Spicant	CRYPTOGAMIA *Filices.*
68	Polytrichum ſubrotundum	CRYPTOGAMIA *Muſci.*
69	Hypnum ſericeum	
70	Bryum truncatulum	
71	Bryum viridulum	
72	Agaricus ovatus	CRYPTOGAMIA *Fungi.*
73	Agaricus fimetarius	

INDEX II.

In which the Latin Names of the Plants are arranged Alphabetically.

	Plate.
Arum maculatum	63
Atriplex haſtata	66
Adonis autumnalis	37
Adoxa Moſchatellina	26
Arabis thaliana	49
Anemone nemoroſa	38
Ajuga reptans	43
Agaricus fimetarius	73
Agaricus ovatus	72
Alopecurus myoſuroides	7
Bryum truncatulum	70
Bryum viridulum	71
Bromus hirſutus	8
Chenopodium viride	16
Chenopodium album	15
Chenopodium polyſpermum	17
Ceraſtium viſcoſum	35
Ceraſtium ſemidecandrum	33
Ceraſtium vulgatum	34
Convolvulus arvenſis	13
Chryſoſplenium oppoſitifolium	27
Epilobium villoſum	22
Epilobium hirſutum	21
Epilobium anguſtifolium	24
Epilobium tetragonum	23
Eryſimum Alliaria	48
Erica cinerea	25
Fumaria officinalis	52
Geum urbanum	36
Geranium molle	50
Glechoma hederacea	44
Galium Aparine	9
Hypnum ſericeum	69
Hyacinthus non ſcriptus	18
Juncus campeſtris	19
Lamium amplexicaule	46
Lamium album	45
Lychnis dioica	32
Lotus corniculatus	56
Medicago lupulina	57
Mercurialis perennis	65
Malva ſylveſtris	51
Oxalis Acetoſella	31
Orchis maſcula	62
Oſmunda Spicant	67
Poa rigida	4
Poa pratenſis	5
Poa trivialis	6
Plantago major	11
Plantago lanceolata	10
Polytrichum ſubrotundum	68
Poterium Sanguiſorba	64
Ranunculus Ficaria	39
Ranunculus hirſutus	40
Ranunculus auricomus	41
Ranunculus ſceleratus	42
Rumex criſpus	20
Sonchus oleraceus	58
Saxifraga tridactylites	28
Sagina erecta	12
Stellaria Holoſtea	30
Solanum nigrum	14
Saponaria officinalis	29
Trifolium ornithopodioides	53
Trifolium ſubterraneum	54
Trifolium fragiferum	55
Tuſſilago Petaſites	59
Tuſſilago Farfara	60
Thymus Serpyllum	47
Veronica hederifolia	1
Veronica arvenſis	2
Veronica Becabunga	3
Viola canina	61

INDEX III.

In which the Engliſh Nomes of the Plants are arranged Alphabetically.

	Plate
Anemone Wood	38
Allſeed	17
Avens common	36
Birds-foot-Trefoil common	56
Bryum brown	70
Bryum green	71
Butter bur	59
Bugle commen	43
Brook-lime	3
Burnet	64
Brome-graſs hairy ſtalk'd	8
Cuckow-pint	63
Convolvulus field	13
Cranes-bill doves-foot common	50
Coltsfoot	60
Campion red	32
Crowfoot pale-leaved	40
Crowfoot wood	41
Crowfoot celery-leaved	42
Cleavers common	9
Dead-nettle white	45
Dock curled	20
Fumitory common	52
Foxtail-graſs field	7
Golden-Saxifrage common	27
Ground-ivy	44
Gooſefoot white	15
Gooſefoot purple-jointed	16
Henbit	46
Hypnum ſilky	69
Hyacinth engliſh	18
Heath fine-leaved	25
Medick hop	57
Mouſear Chickweed leaſt	33
Mouſear-Chickweed common	34
Mouſear-Chickweed broad-leaved	35
Moſchatel tuberous	26
Meadow-graſs hard	4
Meadow-graſs ſmooth-ſtalk'd	5
Meadow-graſs rough-ſtalk'd	6
Mercury dogs	65
Mallow common	51
Muſhroom egg	73
Muſhroom puckered	72
Nightſhade garden	14
Orach ſpear-leaved	66
Orchis early ſpotted	62
Pearlwort upright	12
Pheaſants-eye	37
Podded-mouſear	49
Pilewort	39
Plantain narrow-leaved	10
Plantain common	11
Polytrichum dwarf	68
Ruſh hairy field	19
Speedwell ivy-leaved	1
Speedwell wall	2
Sowthiſtle common	58
Saxifrage rue-leaved	28
Spleenwort rough	67
Sauce-alone	48
Stichwort greater	30
Sopewort	29
Trefoil ſubterraneous	54
Trefoil birds-foot true	53
Trefoil ſtrawberry	55
Thyme wild	47
Violet dogs	61
Wood-Sorrel	31
Willow-herb large-flowered	21
Willow-herb hoary	22
Willow-herb ſquare-ſtalk'd	23
Willow-herb roſebay	24

INDEX I.

In which the Plants contained in the third Faſciculus, are arranged according to the Syſtem of LINNÆUS.

	Latin Name.	*Claſs and Order.*
1	Veronica officinalis	DIANDRIA *Monogynia.*
2	Lycopus europæus	
3	Circæa lutetiana	
4	Iris Pſeudacorus	TRIANDRIA *Monogynia.*
5	Avena flaveſcens	TRIANDRIA *Digynia.*
6	——— elatior	
7	Aira præcox	TRIANDRIA *Trigynia.*
8	Montia fontana	
9	Dipſacus ſylveſtris	TETRANDRIA *Monogynia.*
10	Scabioſa Succiſa	
11	Centunculus minimus	TETRANDRIA *Tetragynia.*
12	Sagina procumbens	
13	Myoſotis ſcorpioides paluſtris	PENTANDRIA *Monogynia.*
14	Lyſimachia Nummularia	
15	Anagallis tenella	
16	Vinca minor	PENTANDRIA *Digynia.*
17	Chenopodium Bonus Henricus	PENTANDRIA *Trigynia.*
18	Sambucus Ebulus	PENTANDRIA *Pentagynia.*
19	Linum catharticum	HEXANDRIA *Monogynia.*
20	Fritillaria Meleagris	
21	Rumex acutus	HEXANDRIA *Trigynia.*
22	—— obtuſifolium	
23	——— maritimus	
24	Epilobium montanum	OCTANDRIA *Monogynia.*
25	Sedum Telephium	DODECANDRIA *Pentagynia.*
26	——— daſyphyllum	
27	Agroſtema Githago	DODECANDRIA *Monogynia.*
28	Lythrum Salicaria	DODECANDRIA *Dodecagynia.*
29	Sempervivum tectorum	
30	Fragaria ſterilis	ICOSANDRIA *Polygynia.*
31	Potentilla Anſerina	
32	Papaver Rhœas	POLYANDRIA *Monogynia.*
33	Betonica officinalis	DIDYNAMIA *Gymnoſpermia.*
34	Stachys ſylvatica	
35	——— paluſtris	
36	Scutellaria galericulata	DIDYNAMIA *Angioſpermia.*
37	Antirrhinum ſpurium	
38	Braſſica muralis	TETRADYNAMIA *Siliquoſa.*
39	Cardamine amara	
40	——— pratenſis	
41	Siſymbrium ſylveſtre	MONADELPHIA *Decandria.*
42	Geranium pyrenaicum	MONADELPHIA *Polyandria.*
43	Malva rotundifolia	
44	Lathyrus pratenſis	DIADELPHIA *Decandria.*
45	Trifolium agrarium	
46	——— repens	
47	Medicago arabica	
48	Hypericum Androſæmum	POLYADELPHIA *Polyandria.*
49	——— hirſutum	
50	——— humifuſum	
51	Picris echioides	SYNGENESIA *Polygamia æqualis.*
52	Hypochæris radicata	
53	——— glabra	
54	Carduus marianus	
55	Bidens cernua	
56	Inula dyſenterica	SYNGENESIA *Polygamia ſuperflua.*
57	——— pulicaria	
58	Viola paluſtris	SYNGENESIA *Monogamia.*
59	Orchis Morio	GYNANDRIA *Diandria.*
60	Ophrys ovata	
61	Typha latifolia	MONOECIA *Polyandria.*
62	——— anguſtifolia	
63	Carex pendula	MONOECIA *Triandria.*
64	Hydrocharis Morſus Ranæ	DIOECIA *Monadelphia.*
65	Hypnum purum	CRYPTOGAMIA *Muſci*
66	Bryum ſubulatum	
67	Bryum argenteum	
	——— ceſpititium	
68	Hydnum auriſcalpium	
69	Agaricus glutinoſus	
70	——— plicatilis	A *Fungi.*
71	——— oſtreatus	
72	Phallus impudicus	

INDEX II.

In which the Latin Names of the Plants are arranged Alphabetically.

	Plate.
Avena flaveſcens	5
——— elatior	6
Aira præcox	7
Anagallis tenella	15
Agroſtema Githago	27
Antirrhinum ſpurium	37
Agaricus glutinoſus	69
——— plicatilis	70
——— oſtreatus	71
Betonica officinalis	33
Braſſica muralis	38
Bidens cernua	55
Bryum ſubulatum	66
——— argenteum	67
——— ceſpititium	67
Circæa lutetiana	3
Centunculus minimus	11
Chenopodium Bonus Henricus	17
Cardamine amara	39
——— pratenſis	40
Carduus marianus	54
Carex pendula	63
Dipſacus ſylveſtris	9
Epilobium montanum	24
Fritillaria Meleagris	20
Fragaria ſterilis	30
Geranium pyrenaicum	42
Hypericum Androſæmum	48
——— hirſutum	49
——— humifuſum	50
Hypochæris radicata	52
——— glabra	53
Hydrocharis Morſus Ranæ	64
Hypnum purum	65
Hydnum auriſcalpium	68
Iris Pſeudacorus	4
Inula dyſenterica	56
——— pulicaria	57
Lycopus europæus	2
Lyſimachia Nummularia	14
Linum catharticum	19
Lythrum Salicaria	28
Lathyrus pratenſis	44
Montia fontana	8
Myoſotis ſcorpioides	13
Malva rotundifolia	43
Medicago arabica	47
Orchis morio	59
Ophrys ovata	60
Potentilla Anſerina	31
Papaver Rhœas	32
Picris echioides	51
Phallus impudicus	72
Rumex acutus	21
——— obtuſifolium	22
——— maritimus	23
Scabioſa Succiſa	10
Sagina procumbens	12
Sambucus Ebulus	18
Sedum Telephium	25
——— daſyphyllum	26
Sempervivum tectorum	29
Stachys ſylvatica	34
——— paluſtris	35
Scutellaria galericulata	36
Siſymbrium ſylveſtre	41
Trifolium agrarium	45
——— repens	46
Typha latifolia	61
——— anguſtifolia	
Veronica officinalis	
Vinca minor	
Viola paluſtris	

INDEX III.

In which the Engliſh Names of the Plants are arranged Alphabetically.

	Plate.
All heal	35
Betony wood	33
Bryum awl-ſhaped	66
——— ſilvery	67
——— matted	67
Blinks	8
Cockle	27
Carex pendulous	63
Cranes-bill mountain	42
Claver	47
Clover Dutch	46
Catſtail broad leaved	61
——— narrow-leaved	62
Dock ſharp-pointed	21
———broad-leaved	22
——— narrow-leaved	23
Devils bit	10
Enchanters-Nightſhade common	3
Elder dwarf	18
Flax purging	19
Fluellin round-leaved	37
Fritillary common	20
Frog-bit	64
Flag yellow	4
Fleabane common	56
——— ſmall	57
Good King Henry	17
Hawkweed long-rooted	52
——— ſmall flowered	53
Hypnum meadow	65
Hydnum ear-picker	68
Houſeleek	29
Hair-graſs early	7
Hemp-agrimony nodding	55
Hooded-Willow-herb common	36
Ladies-ſmock common	39
——— bitter	40
Looſeſtrife purple-ſpiked	28
Muſhroom ſlimy	69
——— plaited	70
——— oyſter	71
Moneywort	14
Mouſear-ſcorpion-graſs	13
Mallow round-leaved	43
Morell ſtinking	72
Nettle-hedge	34
Orpine	25
Oat-graſs yellow	5
——— tall	6
Orchis meadow	59
Ox-tongue	51
Pimpernel bog	15
Pimpernel-baſtard	11
Poppy ſmooth round-headed	32
Pearlwort procumbent	12
Periwinkle ſmall	16
Rocket ſtinking	38
——— water	41
Strawberry barren	30
Saint John's Wort hairy	49
——— trailing	50
Silver-weed	31
Stonecrop thick-leaved	26
Speedwell male	1
Trefoil hop	45
Twayblade	60
Thiſtle milk	54
Teaſel wild	9
Tutſan	48
	44
	58
	24
	2

VERONICA AGRESTIS. PROCUMBENT GARDEN-SPEEDWELL.

VERONICA *Linnæi. Gen. Pl.* DIANDRIA MONOGYNIA.
Raii. Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *agreſtis*, floribus ſolitariis, pedunculatis; foliis cordatis inciſis, petiolatis; caule procumbente.

VERONICA *agreſtis*, floribus ſolitariis, foliis cordatis inciſis pedunculo brevioribus. *Linnæi Syſt. Vegetab. p.* 56.

VERONICA floribus ſolitariis, foliis cordatis inciſis petiolatis. *Hudſon Fl. Angl. p.* 6.

VERONICA caule procumbente; foliis petiolatis, ovatis, crenatis. *Haller. Hiſt. V.* 1. *n.* 594.

VERONICA *agreſtis. Scopoli. Fl. Carn. p.* 21 DIAGN. Primiflora; foliis ovato-cordatis, crenatis, pedunculo brevioribus.

VERONICA floribus ſingularibus, in oblongis pediculis, Chamædryfolia. *Raii. Syn. p.* 279. Germander-Speedwell or Chickweed.

ALSINE foliis Triffaginis. *Gerard. emac.* 616. *Parkinſon.* 764.

ALSINE Chamædryfolia floſculis pediculis oblongis inſidentibus. *Bauhin. Pin.* 250. *Oeder. Fl. Dan. Icon.* 449.

RADIX annua, fibroſa.
CAULES plures, primum erecti, tandem procumbentes, ſemipedales, ſubvilloſi, teretes.
FOLIA alterna, ovato-cordata, ſerrata, petiolis brevibus inſidentia, ſubhirſuta.
FLORES pedunculati, pedunculi axillares, longitudine fere foliorum, poſt florescentiam reflexi.

CALYX: PERIANTHIUM quadripartitum, laciniis lanceolatis, hirſutis, ſubtortuoſis, *fig.* 1.

COROLLA monopetala, ſubrotata, calyce brevior, læviſſimo fere tactu decidua; TUBUS breviſſimus; LACINIÆ concavæ, ſubrotundæ, nunc penitus cœruleæ, nunc venis cœruleis ſtriatæ, *fig.* 2.

STAMINA: FILAMENTA duo, alba, medio craſſiora; ANTHERÆ cœruleſcentes, *fig.* 3.

PISTILLUM: GERMEN ſubcompreſſum, hirſutulum, baſi nectario cinctum; STYLUS viridis, apice incraſſatus, ſtaminibus brevior; STIGMA album, capitatum, *fig.* 4.
PERICARPIUM CAPSULÆ *Veronicæ ſerpyllifolia* ſimilis, at major rotundiorque, *fig.* 5.
SEMINA pallide fuſca, plerumque 6 in ſingulo loculamento, rugoſa, hinc convexa, inde concava, *fig.* 6.

ROOT annual and fibrous.
STALKS ſeveral, firſt upright, then procumbent, about ſix inches in length, round and ſomewhat villous.
LEAVES alternate, of an oval-heart ſhape, ſerrated, placed on ſhort foot-ſtalks and ſlightly hairy.
FLOWERS placed on foot-ſtalks, which proceed from the Axillæ of the leaves and are nearly of the ſame length; after the flowers are gone off turning back.
CALYX: a PERIANTHIUM divided into four laciniæ, which are lanceolate, hairy, and ſomewhat twiſted, *fig.* 1.
COROLLA monopetalous, ſomewhat wheel-ſhaped and ſhorter than the Calyx, falling off on the leaſt touch; the TUBE very ſhort; the LACINIÆ concave, and roundiſh, ſometimes wholly blue, ſometimes ſtriped with blue, *fig.* 2.
STAMINA: two FILAMENTS of a white colour and thickeſt in the middle; ANTHERÆ blueiſh, *fig.* 3.
PISTILLUM: GERMEN flattiſh, a little hairy and ſurrounded at bottom by a Nectarium; the STYLE green, thickeſt at top, and ſhorter than the Stamina; STIGMA roundiſh and white, *fig.* 4.
SEED-VESSEL a CAPSULE like that of the *Veronica ſerpyllifolia*, but larger and rounder, *fig.* 5.
SEEDS of a pale brown colour, generally 6 in each cavity, wrinkled, convex on one ſide and hollow on the other, *fig.* 6.

THERE are few Botaniſts but what are apt to confound this ſpecies of Veronica with the *Veronica arvenſis*, and this appears to ariſe in ſome degree from their ſimilarity to each other, but more perhaps from the ſimilitude of their Latin, and the ambiguity of their Engliſh names. To prevent in ſome degree this confuſion, I have taken the liberty of altering the Engliſh name of *Germander-Speedwell or Chickweed* to that of *procumbent garden Speedwell*, in order that the young Botaniſt may thereby more readily diſtinguiſh it from the ſpecies above mentioned. The ſtalks of the *Agreſtis* are uſually procumbent, and it is found generally in Gardens; whereas the *Arvenſis* has an upright ſtalk, and with us is found moſt commonly on Walls. Beſides ſuch obviouſly diſtinguiſhing characters, theſe two plants differ conſiderably in many other reſpects. In the *Arvenſis* the leaves are ſeſſile, in *this* they are placed on footſtalks; in the *Arvenſis* the flowers are ſeſſile, in *this ſpecies* they likewiſe, are placed on foot-ſtalks: and a difference ſtill more remarkable, or at leaſt more curious, exiſts, which ſeems not to have been attended to, viz. the largeneſs and roundneſs of the ſeed-veſſels, and the particular ſtructure of the ſeed. In moſt of the Veronicas the ſeed-veſſel is heart-ſhaped, and even in this ſpecies it retains ſomewhat of that form, although each of the Cavities is large and round; and if we examine the form of the ſeeds, we ſhall not wonder at this particular conſtruction, for each ſeed inſtead of being ſmall and flat as in other Veronicas, is large, convex on one ſide, hollow on the other, and wholly different in its appearance. This peculiarity of ſtructure, ſhows what inconſtancy there is in the parts of fructification, and how improper it would be to found a Genus on the particular form of any one of them, ſince thoſe which are in general the moſt uniform, are ſometimes ſubject to ſuch uncommon variations. The number of ſeeds in each Capſule is generally about 12, LINNÆUS ſays 8, SCOPOLI from 16 to 20.

This ſpecies grows frequently in Gardens, and flowers through moſt of the ſummer months. No particular virtues or uſes are attributed to it.

Veronica agrestis.

1 2 3 3 4 4 5 6 7

Veronica Chamædrys.

J. Kilburn pinxt et sculpt

VERONICA CHAMÆDRYS. WILD GERMANDER.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

VERONICA *Chamædrys* racemis lateralibus, foliis ovatis rugoſis dentatis ſeſſilibus, caule bifariam piloſo. *Lin. Syſt. Vegetab. p.* 57. *Fl. Suecic. p.* 6.

VERONICA foliis cordatis ſubrotundis, hirſutis, nervoſis, ex alis racemoſa. *Haller. hiſt. n.* 536.

CHAMÆDRYS ſpuria minor rotundifolia. *Bauhin. pin.* 249.

CHAMÆDRYS ſpuria ſylveſtris. *Parkinſon*, 107.

CHAMÆDRYS ſylveſtris. *Gerard. emac.* 657. *Raii Syn.* 281. Wild Germander, *Hudſon. Fl. Angl. p.* 5. *Scopoli. Fl. Carniol. p.* 15. *(a)* *OEder Fl. Dan. icon.* 448.

RADIX perennis, repens, fibroſa.

CAULES numeroſi, decumbentes, teretes, duri, *bifariam denſe hirſuti*, ramoſi.

FOLIA cordato-ovata, oppoſita, nunc ſeſſilia nunc petiolis brevibus inſidentia, ſerrata, venoſa, hirſutula.

FLORES numeroſi, ad 20, cærulei, petiolati: *Petioli* BRACTÆA lanceolatâ ſuffulti; RACEMI longi, nunc oppoſiti nunc ſolitarii.

CALYX PERIANTHIUM quadripartitum, perſiſtens, foliolis lanceolatis, hirſutulis, *fig.* 1.

COROLLA monopetala, rotata, tubus breviſſimus internè ad inferiorem partem villoſus, LIMBO quadripartito, plano, laciniis ſubcordatis ad baſin venis ſaturatioribus ſtriatis, inferiore anguſtiore, *fig.* 2.

STAMINA: FILAMENTA duo apice incraſſata, adſcendentia, *fig.* 3. ANTHERÆ ſagittatæ, *fig.* 4. POLLEN album, *fig.* 6.

PISTILLUM: GERMEN compreſſum glandula nectarifera cinctum: STYLUS declinatus, cæruleſcens, STIGMA obtuſum, purpureum, *fig.* 5.

PERICARPIUM: CAPSULA cordata, *ſubcompreſſa*, pallide fuſca, *calyce paulo brevior*, ad marginem hirſutulum, *fig.* 7.

SEMINA: plura, compreſſa, flaveſcentia, *fig.* 8.

ROOT perennial, creeping, and fibrous.

STALKS numerous, ſpreading, round, hard, *hairy on each ſide*, hairs very thick together, branched.

LEAVES of an heart ſhaped oval form, oppoſite, generally ſeſſile, ſometimes ſtanding on ſhort foot-ſtalks, ſerrated, veiny, and ſlightly hirſute.

FLOWERS numerous, to 20, of a bright blue colour, forming long RACEMI (which are ſometimes oppoſite, ſometimes ſingle), ſtanding on *foot-ſtalks*, each of which is ſupported by a long-pointed BRACTÆA.

CALYX: a PERIANTHIUM divided into four ſegments, and continuing, the ſegments lanceolate and ſlightly hairy, *fig.* 1.

COROLLA monopetalous and wheel ſhaped, the TUBE very ſhort, internally villous on the lowermoſt ſide, the LIMB flat, and divided into four ſegments, the ſegments ſomewhat heart-ſhaped, ſtriated at bottom with veins of a purple colour, the lowermoſt ſegment narrower than the reſt, *fig.* 2.

STAMINA: two FILAMENTS, thickeſt at top, riſing upward, *fig.* 3. the ANTHERÆ arrow-ſhaped, *fig.* 4. the POLLEN white.

PISTILLUM: the GERMEN flattiſh, ſurrounded at bottom by a nectariferous gland, *fig.* 6. the STYLE hanging downwards, blueiſh; the STIGMA blunt, and purple, *fig.* 5.

SEED-VESSEL: a CAPSULE, heart-ſhaped, *flattiſh*, of a light brown colour, *a little ſhorter than the calyx*, and ſlightly hairy at the edge, *fig.* 7.

SEEDS ſeveral, flat, of a yellowiſh brown colour, *fig.* 8.

The flowers of this Veronica are the largeſt and moſt ſpecious of all the Plants of that Genus which grow wild in this Kingdom; many plants with leſs beauty are cultivated in our Gardens with the greateſt care.

The leaves have been recommended by ſome writers as a ſubſtitute for *Tea*.

It bears a conſiderable reſemblance to the *Veronica montana*, but differs eſſentially from that plant in the ſize of its Seed-veſſels and the great number of flowers which it bears on its Racemi. See *Jacquin. Flor. Auſtriac. Vol.* 2.

When growing wild the leaves are uſually ſeſſile or placed on very ſhort foot-ſtalks, when cultivated they become larger and the foot-ſtalks moderately long; a kind of monſtroſity, which LINNÆUS has likewiſe obſerved, is very frequent on the leaves at the extremity of the ſtalk; which are collected into a very hairy white knob, on opening one of theſe I found two or three Inſects in their Pupa or Chryſalis ſtate, which moſt probably would have produced ſome ſpecies of Fly. This appearance is very common at the latter end of Summer.

This is an early blowing plant, and grows very common on dry banks, under hedges, and in orchards; it flowers in May and June.

5

VERONICA SERPYLLIFOLIA. LITTLE SMOOTH SPEEDWELL, OR PAUL'S BETONY.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

VERONICA *ſerpyllifolia* racemo terminali ſubſpicato, foliis ovatis glabris, crenatis. *Linnæi Syſt. Vegetab. p.* 56. *Fl. Suecic. p.* 6.

VERONICA caule recto, foliis ovatis, glabris, crenatis, petiolis ex alis unifloris, breviſſimis. *Haller hiſt. n.* 546.

VERONICA pratenſis ſerpyllifolia. *Bauhin Pin.* 247.

VERONICA pratenſis minor. *Parkinſon.* 551.

VERONICA minor. *Gerard emac.* 627.

VERONICA foemina quibuſdam, aliis Betonica Pauli Serpyllifolia. *I. Bauhin.* III. 285.

VERONICA *Raii Syn. p.* 279. *n.* 3. *Hudſon, Fl. Angl. p.* 4. *n.* 4 *Scopoli Fl. Carniol. V.*1. *p.* 12. *n.* 10 *OEder Fl. Dan. icon.* 492.

RADIX perennis, fibroſiſſima.

CAULES numeroſi, ad baſin repentes, dein erecti, ſimplices, palmares, teretes, læves.

FOLIA oppoſita, ſubconnata, ſubrotundo-ovata, *rariter et obſolete ſerrata*, *glabra*, trinervia.

FLORES albi, venis cæruleis picti, ſpicati, pedunculati, alterni, BRACTEÆ magnæ, ovatæ.

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-acutis, glabris, *fig.* 1.

COROLLA monopetala, rotata; tubus breviſſimus; laciniæ ſubcordatæ, inferiore anguſtiore; ſuperiore laciniâ ſtriis aut venis purpureis octo notata, lateralibus venis duabus, inferiore penitus alba, *fig.* 2.

STAMINA: FILAMENTA duo, alba, apice incraſſata, *fig.* 5, 6. ANTHERÆ cæruleſcentes.

PISTILLUM: GERMEN ſubcompreſſum, STYLUS albus, apice paululum incraſſatus, perſiſtens. STIGMA capitatum, rubens, *fig.* 3.

NECTARIUM ad baſin germinis, ut in Veronica Chamædrys.

PERICARPIUM: CAPSULA ſubcordata, fuſca, pro magnitudine plantæ magna, *fig.* 4.

SEMINA plurima, 60 numeravi, e luteo-fuſca, ſub-ovata, *fig* 8.

⁂ ROOT perennial, and very fibrous.

STALKS numerous, creeping at bottom, then growing upright, ſimple, three or four inches high, round and ſmooth.

LEAVES oppoſite, nearly uniting at bottom, *of a roundiſh-oval form, here and there ſlightly ſerrated, ſmooth* and trinervous.

FLOWERS white, coloured with blue veins or ſtripes, growing in ſpikes on foot-ſtalks alternately. FLORAL LEAVES large and oval.

CALYX: A PERIANTHIUM divided into four parts, the Segments of an oval pointed ſhape, and ſmooth, *fig.* 1.

COROLLA monopetalous, wheel-ſhaped, the tube very ſhort, the ſegments ſomewhat heart-ſhaped, the lower one narroweſt; the upper ſegment marked with eight purple veins or ſtripes, the ſide ones with two, and the lower one entirely white *fig.* 2.

STAMINA: two FILAMENTS, white and thickiſh towards the extremity; the ANTHERÆ blueiſh *fig.* 5, 6.

PISTILLUM: the GERMEN flattiſh, the STYLE white, a little thicker towards the extremity, and continuing. STIGMA roundiſh, and of a rediſh colour, *fig.* 3.

NECTARY at the bottom of the Germen as in the Veronica Chamædrys.

SEED-VESSEL: a CAPSULE ſomewhat heart-ſhaped, of a brown colour, and large in proportion to the plant, *fig.* 4.

SEEDS numerous, of a yellowiſh brown colour, and ſomewhat oval ſhape, *fig.* 8. We counted 60 in one capſule.

No particular virtues are attributed to this little plant by Writers.

It is one of the leaſt of the Veronicas, and occurs frequently in Meadows and Fields, and ſometimes in Gardens, flowering in the Spring and Autumnal Months.

There is a great deal of delicacy in its bloſſoms, but they are too minute to make its beauty conſpicuous enough for the Garden.

Its ſmall, round, ſmooth and ſhining leaves readily diſtinguiſh it from the other Speedwells.

Veronica serpyllifolia.

ANTHOXANTHUM ODORATUM. SWEET-SCENTED OR VERNAL GRASS.

ANTHOXANTHUM *Linnæi Gen. Pl.* DIANDRIA DIGYNIA.
Calyx. Gluma bivalvis, uniflora. *Corolla.* Gluma bivalvis, acuminata. *Semen* unicum.
Raii Synop. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.
ANTHOXANTHUM *odoratum* ſpica oblonga, ovata, laxa.
ANTHOXANTHUM *odoratum* ſpica oblonga, ovata, floſculis ſubpedunculatis ariſta longioribus, *Linnæi Syſt. Vegetab. p.* 67. *Fl. Suecic. No.* 33.
AVENA diantha, folliculo villoſo, calycis glumis inæqualibus, altera de imo dorſo, altera de ſummo ariſtata. *Haller. hiſt. helv. No.* 1491.
ANTHOXANTHUM *odoratum Scopoli Fl. Carniol. No.* 38. *Hudſon Fl. Angl. p.* 10. *Stilling fleet miſcel. t.* 1. *Schreber Gram. tab.* 5. *p.* 49.
GRAMEN pratenſe ſpica flaveſcente. *Bauhin. Pin.* 3.
GRAMEN vernum ſpica brevi laxa. *Raii Syn.* 389. *Scheuch. hiſt.* 88.

RADIX perennis, fibroſa.
CULMI primum obliqui, demum erecti, dodrantales aut pedales.
FOLIA inter digitos attrita odorem Aſperulæ odoratæ ſpargunt, plerumque pubeſcentia, ſæpe leniter tortuoſa, membranâ ad baſin inſtructa, Vagina ſtriata, lævis.
SPICÆ oblongo-ovatæ, laxæ.
CALYX: GLUMA bivalvis, Valvulis inæqualibus, inferiore dimido breviore, membranacea, acuta, ſuperiore acuminata, nervis tribus viridibus extantibus, *fig.* 3, 2.
COROLLA: GLUMA bivalvis, valvulæ ſubæquales, membranaceæ, *piloſæ* ariſtatæ, fuſcæ; altera Ariſta quæ demum geniculata fit, prope baſin exſurgit, altera prope apicem, *fig.* 4.

NECTARIUM: GLUMULÆ duæ, pellucidæ, nitidæ, ovatæ, inæquales, *germen includentes*, *fig.* 5, 6.

STAMINA: FILAMENTA duo prælonga; ANTHERÆ oblongæ, purpureæ, utrinque furcatæ, *fig.* 5.
PISTILLUM: GERMEN minimum oblongo-ovatum; STYLI duo *filiformes* glumi longiores, verſus apicem plumuloſæ, *fig.* 7.

SEMEN unicum, Nectario fuſco, nitido, incluſum, *fig.* 8.

ROOT perennial and fibrous.
STALKS at firſt growing obliquely, finally becoming upright, uſually from 8 to 12 inches high.
LEAVES, if rubbed betwixt the fingers, ſmelling like Woodroff, generally pubeſcent and often curled, furniſhed with a membrane at bottom; the Sheath ſtriated and ſmooth.
SPIKES of an oblong oval ſhape and ſmooth.
CALYX: a GLUME of two Valves, the Valves unequal, the lowermoſt ſhorter by one half, membranous and acute; the uppermoſt acuminated, with three ſtrong nerves or ribs, *fig.* 3, 2.
COROLLA: a GLUME of two Valves, the Valves nearly equal, membranous, hairy, of a brown colour and furniſhed with Ariſtæ, one of the Ariſtæ which finally becomes bent, ſprings from the baſe of the Valve, the other almoſt at the top *fig.* 4.
NECTARIUM: two ſmall, pellucid, ſhining, oval, unequal Glumes or Valves *incloſing the Germen*, *fig.* 5, 6.
STAMINA: two FILAMENTS very long; ANTHERÆ long, purple, forked at each end, *fig.* 5.
PISTILLUM: GERMEN very ſmall, of an oblong oval ſhape; STYLES two, *ſlender*, longer than the valves, and towards the top a little feathered *fig.* 7.
SEED ſingle, incloſed within its brown, ſhining Nectarium, *fig.* 8.

THE *Anthoxanthum* is diſtinguiſhed from the other Graſſes by a very ſingular circumſtance, viz. that of having only *two Stamina*, *fig.* 1. hence it is placed by LINNÆUS among the *Diandrous* plants, and ſeparated from all the other Graſſes; this peculiarity, although it occaſions a ſeparation which does violence as it were to Nature, yet it ſerves in a very ſtriking manner to diſcriminate this Genus from a numerous and difficult tribe of plants: excluſive of this ſingularity, it differs alſo very eſſentially in the other parts of its fructification; each of the Spiculæ contains in common with many other graſſes, only one flower, *fig.* 1: one of the *Glumæ Calycinæ*, or valves of the Calyx, is ſmall and membranous, *fig.* 3; the other is large, and incloſes, or wraps up in it, as it were, the whole of the fructification, *fig.* 2; theſe glumes, ſo far as I have obſerved, do not open and expand themſelves in the manner obſervable in the *Avena's*, and many other graſſes, were they ſeparate quite wide, and expoſe their little feathery Styles; but the Stamina and Piſtilla appear to puſh themſelves out, the glumes remaining cloſed, *fig.* 1. The *Glumæ Corollaceæ* are very diſſimilar to thoſe of moſt other graſſes, being remarkably hairy, and having each of them an Ariſta, the longeſt of which ſprings from near the baſe of the glume, is at firſt ſtraight, but as the ſeed becomes ripe, the top of it is generally bent horizontally inward; the other Ariſta ariſes from near the top of the oppoſite Glume or Valve, *fig.* 4. The *Glumulæ Nectarii* or little Glumes of the Nectarium, differ no leſs in their ſtructure, being compoſed of two little oval ſhining Valves, one of which is ſmaller than the other; theſe cloſely embrace the Germen, and cannot be ſeen but with great difficulty, unleſs they are obſerved juſt at the time that the Antheræ are protruding from betwixt them, when they are very diſtinct, *fig.* 6; as ſoon as the Antheræ are excluded, they again cloſe on the Germen, and continue to form a coat to the ſeed which does not ſeparate. *fig.* 5, 8.

The Farmer, or thoſe who have not been accuſtomed to examine plants minutely, may readily diſtinguiſh this graſs by its ſmell; if the leaves are rubbed betwixt the fingers, they impart a grateful odour like that of Woodruff,—hence I have called it ſweet-ſcented.

Like the *Trifolium repens* or *Dutch Clover*, and many others of our moſt uſeful plants, this Graſs grows on almoſt every kind of ſoil, from the pooreſt and drieſt, to the moſt fertile and boggy; it ſeems however in general to prefer a ſoil that is moderately dry. It is ſubject, like all other plants, to vary in its ſize, according to the goodneſs of the ground it grows in: the leaves have a particular tendency to be curled if the ſoil be rich; and when it grows in woods, the ſpikes are often much ſlenderer and looſer.
It has been called by ſome Authors *Vernal* or *Spring Graſs*, from its coming into ear earlier than moſt others; towards the middle of May it is in full bloom, and about the middle of June the ſeed is ripe—and may be eaſily ſeparated on rubbing.

There is great reaſon to believe, that this is one of our Graſſes which might be cultivated with conſiderable advantage: in the meadows about town it grows to a conſiderable height, and forms a thick tuft of leaves at bottom; but the circumſtance moſt in its favour, is its early appearance in the Spring: this ſeems to point it out as a proper graſs to ſow with others in laying down meadow land, and probably the *Poa trivialis* or *common Meadow Graſs*, with the *Feſtuca elatior* or *Meadow Feſcue* joined to it, would form a mixture, the produce of which, would for this purpoſe, be ſuperior to that of moſt others.

Anthoxanthum odoratum.

Aira aquatica.

AIRA AQUATICA. SWEET-TASTED WATER AIRA.

AIRA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2 valvis, 2 florus. *Floſculi* abſque interjecto rudimento.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

AIRA *aquatica* panicula patente, floribus muticis lævibus calyce longioribus, foliis planis. *Linnæi Syſt. Vegetab. p.* 96. *Fl. Suecic. No.* 68.

POA locuſtis bifloris; glabris, florali gluma majori plicata, ſerrata. *Haller hiſt. No.* 1471.

AIRA *aquatica Scopoli Fl. Carniol.* 94. *Hudſon Fl. Angl.* 29.

AIRA culmo inferiore repente, floſculis muticis calyce longioribus, altero pedunculato. *Roy. lugdb.* 60.

GRAMEN caninum ſupinum paniculatum dulce. *Bauhin Pin.* 2.

GRAMEN miliaceum aquaticum. *Raii Syn.* 402. *Scheuz. agr.* 218.

GRAMEN miliaceum fluitans ſuavis ſaporis. *Merret. Pin.*

RADIX perennis.

CULMUS baſi repit, ſurculoſque emittit more Feſtucæ fluitantis qui longe excurrunt et ad geniculos radiculas plures albas dimittunt; culmus demum erigitur, pedalis circiter, teres, erectus, fiſtuloſus, tener.

FOLIA latiuſcula, tenera, lævia, carinata, vaginæ ſtriatæ, ad baſin rubræ præcipue in ſurculis.

PANICULA erecta, diffuſa, laxa, racemi plures ex uno puncto, ſæpe flexuoſi.

SPICULÆ plerumque biflores, floſculo uno ſeſſili, altero pedunculato, purpurei, apicibus albidis, *fig.* 1.

CALYX: GLUMA bivalvis, valvulis inæqualibus, purpureis, lævibus, Corolla multo brevioribus, *fig.* 2.

COROLLA: GLUMA bivalvis, valvulis æqualibus, ſubtruncatis, plicatis ſive angulatis, *fig.* 3.

STAMINA: FILAMENTA tria capillaria, longitudine Corollæ; ANTHERÆ flavæ, *fig.* 3.

PISTILLUM: GERMEN ovatum; STYLI duo plumoſi, *fig.* 4.

NECTARIUM GLUMULÆ duæ minimæ ad baſin Germinis, *fig.* 5.

SEMEN ovatum, intra Glumas arcte clauſum, *fig.* 7.

ROOT perennial.

STALK creeps at bottom, and ſends out young ſhoots like the Flote Feſcue graſs, which run out to a conſiderable diſtance, and ſend down ſmall white roots at the joints; it then becomes erect, grows to about a foot in height, is round, hollow, and tender.

LEAVES broadiſh, tender, ſmooth, carinated, the ſheaths ſtriated, red at bottom, particularly in the young ſhoots.

PANICLE upright, ſpreading, looſe; branches ſeveral, proceeding from one point, frequently crooked.

SPICULÆ generally contain two flowers, one of which is ſeſſile, and the other ſtands on a foot-ſtalk, purple, the tips white, *fig.* 1.

CALYX: a GLUME of two valvess the valves unequal, purple, ſmooth, and much ſhorter than the Corolla, *fig.* 2

COROLLA: a GLUME of two valves, the valves equal, as if cut off at top, folded or angular, *fig.* 3.

STAMINA: three capillary FILAMENTS the length of the Corolla; ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN oval; STYLES two and feathery, *fig.* 4.

NECTARY two very minute GLUMES at the bottom of the Germen, *fig.* 5.

SEED oval, cloſely contained within the Glumes, *fig.* 7.

The ſame ſoil and ſituation which produces the *Feſtuca fluitans*, is productive alſo of this graſs; they both grow in gently flowing ſtreams, or in wet boggy meadows; this circumſtance may ſerve among others to diſtinguiſh the *Aira aquatica* from ſome of the *Poa's*, with which at firſt ſight the young botaniſt might eaſily confound it: it has however beſides this, many other characters which point it out more obviouſly. The bottom of the ſtalk uſually creeps on the ground, and when it gets into the water, it runs out like the *Feſtuca fluitans* to a conſiderable diſtance, throwing off roots and young ſhoots as it paſſes along, very much in the manner of that graſs: the ſtalk grows about a foot or more in height, is hollow, and remarkably tender; the leaves are broader than any of the *Poa's*, except the *Poa aquatica*, which is in every reſpect a much ſtronger plant: but what more eſpecially characterizes this graſs, is the purple or blueiſh colour of the Panicles, which is diſcernible even at a diſtance; and the ſweet taſte of the flowers if drawn through the mouth, whence this graſs has acquired the name of *dulce*. Its parts of fructification likewiſe above deſcribed, diſtinguiſh it very ſtrongly: when dried and placed between papers, the flowers and ſeeds are very apt to fall off.

It flowers in June and July, and may be found almoſt every where in the ſituations above-mentioned.

With reſpect to its uſes in rural œconomy, it is in every reſpect inferior to the *Flote feſcue graſs*, conſequently not worth cultivating for the uſe of cattle.

In a country like ours, where cultivation has made a conſiderable progreſs, the water plants are confined to a ſmall ſpace compared to what they occupied in a ſtate of nature; the draining of bogs and lakes has rendered many large tracts in ſeveral parts of the kingdom, capable of producing corn and graſs adapted to the uſe of cattle, which were formerly inacceſſible to man or beaſt. We ought not however to look on this or any other plant as made in vain, becauſe we do not immediately ſee the uſes they are applied to: ſeveral ſorts of water-fowl which abound in uninhabited countries, are expert gatherers of the ſeeds of the *aquatic graſſes*; and no leſs than five different ſpecies of *Muſci* or *Flies*, were produced from a few handfuls of the ſeeds of this graſs, which when I gathered it, were doubtleſs in their Pupa or Chryſalis ſtate: How little do we know of natures productions!

POA ANNUA. COMMON DWARF POA.

POA *Linnæi Gen. Plant.* TRIANDRIA DIGYNIA.

Raii Synop. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *annua*, panicula diffusa, angulis rectis, spiculis obtusis, culmo obliquo compresso. *Lin. Syst. Vegetab. p.* 97. *Spec. Plant. ed.* 3. *p.* 99. *Fl. Suecic. p.* 228.

POA culmo infracto, panicula triangulari, locustis trifloris glabris. *Haller. hist. Vol.* 2. *p.* 223.

GRAMEN pratense paniculatum minus. *Bauhin. Pin. p.* 2

GRAMEN pratense minimum album et rubrum. *Gerard. emac.* 3. *Parkinson.* 1156.

GRAMEN pratense minus seu vulgatissimum. *Raii Synop.* 408. *Hudson. Fl. Angl. p.* 34. *Scopoli. Fl. Carniol.* 71. *Stillingfleet. tab.* 7

RADIX annua, fibrosissima.
CULMI plures, cespitosi, semiprocumbentes, in pratis vero inter alias plantas crescentes, suberecti, paululum infracti, semipedales.

VAGINÆ compressæ, ancipites, læves.
FOLIA plurima, brevia, carinata, glabra, sæpe transversim rugosa, margine minutissime aculeata. *fig.* 8.
PANICULA triangularis, subcompressa, flores subsecundi.
PEDUNCULI *universales* ad basin paniculæ plerumque *bini*, altero breviore, in medio frequenter *terni*, apice vero *solitarii*; anguli nunc recti, nunc obliqui.

SPICULÆ ovato-acutæ, compressæ, utrinque acutæ trifloræ, quadrifloræ. *fig.* 2.
CALYX: GLUMA bivalvis, valvulis concavis, inæqualibus. *fig.* 1.
COROLLA bivalvis, valvulis villosis, margine membranaceis, albidis, una majore, concava, obtusiuscula; alterâ minore, angustiore. *fig.* 3.

STAMINA: FILAMENTA tria capillaria; ANTHERÆ flavescentes, bifurcatæ. *fig.* 4.
PISTILLUM. GERMEN ovatum, STYLI duo ramosissimi, pellucidi. *fig.* 5.
SEMEN ovatum, corolla adnascente tectum, ad basin villosulum. *fig.* 7.

ROOT annual and very fibrous.
STALKS numerous, forming a turf, semiprocumbent, but in meadows when growing among other plants, nearly upright, a little crooked, and about half a foot high.
SHEATHS flat, two edged, and smooth.
LEAVES very numerous, short, keel-shaped, smooth, frequently wrinkled transversely, the edge very finely serrated. *fig.* 8.
PANICLE of a triangular shape and flattish, the flowers growing mostly to one side.
PEDUNCLES: the *universal peduncles* generally proceed from the bottom of the panicle in *pairs*, one of which is shorter than the other, from the middle often by *threes*, and at top *singly*; forming angles sometimes straight, sometimes oblique.
SPICULÆ oval and pointed, flatish and sharp on both sides, containing three and four flowers. *fig.* 2.
CALYX: a GLUME of two valves, the valves hollow and unequal. *fig.* 1.
COROLLA of two valves, the valves villous, membranous and whitish at the edges, the one larger, hollow and bluntish, the other smaller and narrower. *fig.* 3.
STAMINA: the FILAMENTS very minute, the ANTHERÆ yellowish and forked. *fig.* 4.
PISTILLUM: the GERMEN oval, two STYLES exceedingly ramified and pellucid. *fig.* 5.
SEED oval, covered by the Corolla which adheres to it, at bottom slightly villous. *fig.* 7.

THE laudable Society established in London for the encouragement of Manufactures, Arts, and Commerce, sensible of the improvements which might be made in Agriculture, from a more general introduction of the most useful English *Grasses*, have offered Premiums to such as shall give the best account of their cultivation, and the *Poa Annua* above described, is one of those they have selected, from its appearing to them to be one of the most useful.

Mr. Stillingfleet observes that it makes the finest turf, that he has seen in high Suffolk whole fields of it, without any mixture of other Grasses, and that as some of the best salt Butter we have in London comes from that County, he apprehends it to be the best Grass for the Dairy; from observing likewise, that this Grass flourished much more from being trodden on, he concludes that frequent rolling must be very serviceable to it.

There is no Grass better entitled to Ray's epithet of *Vulgatissimum* than this, as it occurs almost every where, in Meadows, Gardens, at the sides of Paths, and on Walls: when it grows in a very dry situation, it frequently doth not exceed three inches, but in rich meadows it often grows more than a foot in height. The panicle is frequently green, but in open fields it acquires a reddish tinge; it flowers all the Summer long, and even in Winter if the weather be mild.

It appears to be the first general covering which Nature has provided for a fruitful soil when it has been disturbed; for which reason, in Walks, Pavements, or Pitching, it may be considered as one of the most troublesome of Weeds; the most expeditious method of destroying it, would probably be by pouring boiling water on it.

All the Authors that have described this Grass call it an annual, it differs however very considerably from the other annual Grasses, they throw up their Spikes or Panicles, produce their flowers and seeds, and then die away; this on the contrary keeps continually throwing out new shoots, and producing new flowers, and seeds, and if the ground be moist, a single plant will remain growing in this manner throughout the year, so that we generally find on the same plant, young shoots and ripe seeds.

"*Hic ver assiduum atque alienis mensibus æstas.*"

Perhaps this is the only vegetable we have that in this Circumstance imitates the Tropical plants.

Although its seed may be gathered the whole summer long, yet about the latter end of May, it will be found in the greatest plenty: Experience must determine the best method, in which this Grass should be cultivated, whether by sowing its seed, or dividing and transplanting the Grass itself; as this seed would with more difficulty be procured in large quantities than that of many others, and as a single tuft of this Grass may be divided into a vast number of young plants, probably transplanting it in wet weather would be the most eligible mode of cultivation.

These observations are submitted to the consideration of the Farmer and Gentlemen of landed property, who reside in the Country, and who have both leisure and opportunity to try experiments of this kind. Although the Authors province more particularly is to describe and figure these plants in such a manner as to make them as obvious as possible, yet he would be exceedingly happy to communicate to the public, any improvements which may be made in this or any other branch of Agriculture, that he may be favoured with.

FESTUCA ELATIOR. TALL FESCUE GRASS.

FESTUCA FLUITANS. FLOTE FESCUE GRASS.

FESTUCA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA:

Raii Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

FESTUCA panicula ramoſa erecta, ſpiculis ſubſeſſilibus, teretibus muticis. *Linnæi Syſt. Vegetab. p.* 102.

Fl. Suecic. p. 32.

POA locuſtis teretibus multifloris, glumis floralibus exterioribus truncatis, interioribus bifidis. *Haller. hiſt. p.* 219. *n.* 1453. *v.* 2.

POA fluitans. *Scopoli Fl. Carniol. p.* 73.

GRAMEN aquaticum fluitans, multiplici ſpica. *Bauhin Pin.* 2.

GRAMEN aquaticum cum longiſſima panicula. *I. Bauhin.* II. 490. *Raii Syn. p.* 412. Flote-Graſs.

GRAMEN fluviatile. *Gerard emac.* 14. *Parkinſon.* 1275. *Hudſon. Fl. Angl. p.* 38. *Oeder. Fl. Dan. t.* 237. *Schreber. Gram. tab.* 3. *Stillingfleet. miſ. tab.* 10.

RADIX perennis, in limum profunde penetrans.

CULMUS pro ratione loci pedalis ad tripedalem, baſi repens ſurculoſque promens, dein ſuberectus, vaginis foliorum ad paniculam uſque amictus.

VAGINÆ foliorum compreſſæ, ſubancipites, ſtriatæ.

FOLIA latiuſcula, lævia; *ſurculorum* erecta, carinata, breviuſcula, *caulina* longiora, planiuſcula, flaccida, aquis tempore hyberno proſtrata.

PANICULA longa, inclinata, nonnunquam ſubſpicata ſæpius vero ramoſa, ramis nunc cauli adpreſſis nunc diſtantibus, ut pinxit Cl: Schreberus.

SPICULÆ tenues, teretes, unciales aut ſeſquicunciales 9 ad 12 floræ, rachi adpreſſæ.

CALYX: GLUMA bivalvis, valvulis inæqualibus, membranaceis. *fig.* 2.

COROLLA bivalvis, valvulæ longitudine æquales, calyce majores, *inferiore* majore, concava, lineata, nervis apice ſæpe coloratis, apice membranacea, obtuſiuſcula, ſæpius eroſa; *ſuperiori* lanceolata, compreſſa, bicuſpidata. *fig.* 3. 4.

STAMINA: FILAMENTA tria capillaria, ANTHERÆ flavæ aut purpuraſcentes, oblongæ, *fig.* 5.

PISTILLUM: GERMEN ovatum, STYLI duo ſubulati, reflexi, STIGMATA ramoſiſſima. *fig.* 7. 6. 8.

NECTARIUM Glandula ſquamiformis, cordata, horizontalis, ad baſin germinis. *fig.* 9.

SEMEN oblongum, nitidum olivaceum, bicorniculatum, nudum. *fig.* 10. 11.

FIG 12 Spicula morbo *Ergot* affecta.

ROOT perennial, ſtriking deep into the mud.

STALK according to its place of growth from one to three feet in length, creeping at bottom and ſending forth young ſhoots, afterwards nearly upright; covered with the ſheaths of the leaves as far as the panicle.

SHEATHS of the leaves, flattened, two edged, and ſtriated.

LEAVES rather broad and ſmooth, thoſe of the young ſhoots upright, keel-ſhaped, and ſhortiſh; thoſe of the ſtalk longer, flattiſh, weak, and hanging down, in the winter ſeaſon lying flat on the water.

PANICLE long, generally inclined or bending down a little, ſometimes forming a kind of ſpike, but moſt commonly branched; the branches ſometimes preſſed to the ſtalk, ſometimes diverging from it in the manner repreſented by Schreber.

SPICULÆ ſlender, round, an inch or an inch and a half long, producing from 9 to 12 flowers, preſſed to the Stalk.

CALYX: a GLUME of two valves, which are unequal and membranous. *fig.* 2.

COROLLA of two valves, which are of an equal length and bigger than the Calyx, the *lower valve* largeſt, concave and nervous, the nerves towards the top frequently coloured, at top membranous, rather blunt with uneven points, the upper valve more pointed, flat and bifid. *fig.* 3. 4.

STAMINA: three FILAMENTS very ſlender, ANTHERÆ oblong and yellow or purpliſh. *fig.* 5.

PISTILLUM: GERMEN oval, STYLES two, tapering and bending back, STIGMATA very much branched. *fig.* 7. 6. 8.

NECTARY a ſmall heart-ſhaped ſquamiform gland, placed horizontally at the bottom of the Germen. *fig.* 9.

SEED oblong, ſhining, of an olive colour, with two little horns, and naked. *fig.* 10. 11.

FIG 12 a Spicula affected with the diſeaſe called *Ergot.*

IN ſpeaking of the *Bromus mollis*, we had occaſion to remark the very great variety of appearance to which the Graſſes were ſubject from ſoil and ſituation, and this obſervation is equally applicable to the *Feſtuca fluitans.*

This Graſs appears to thrive beſt in ſtill waters, or gently running ſtreams, where its numerous fibres penetrate eaſily into the mud; in ſuch ſituations it becomes very luxuriant, the leaves are large, tender and ſweet, and the Panicle becomes very much branched; but in Meadows where it is deprived of its natural quantity of water, it becomes in every reſpect leſs, and the Panicle is frequently changed to a ſimple ſpike; when it has nearly done flowering, the branches of the Panicle generally project from the main ſtalk ſo as to form an acute angle. In every ſituation whether the Panicle be large, or ſmall, the Spiculæ are always preſſed cloſe to the ſtalk or branches of the Panicle, and this circumſtance joined to the length, and roundneſs of the Spiculæ, ſufficiently characterize this ſpecies; if it ſhould not however, its parts of fructification afford at once a moſt pleaſing and ſatisfactory diſtinction, *vid. fig.* 6. 9. 10.

We

Festuca fluitans.

We have often had the ſingular pleaſure of obſerving this Graſs ſoon after being gathered, expand its Glumes and expoſe its delicate yellow Stamina, and ſtill more delicate Piſtilla, and in this expanded ſtate each Spicula puts on a very different face, and ſeems to invite the Student to its inveſtigation, and would he wiſh to become acquainted with the ſtructure of this uſeful tribe of plants, he cannot ſelect one more proper for his purpoſe, as it may be found in almoſt every watery ditch, flowering from the beginning to the end of Summer, and has all the parts of fructification which are peculiar to the Graſſes, large enough to be diſtinctly diſcerned even by the naked Eye, and ſo expoſed as to be viſible without the trouble of diſſection.

Modern Botaniſts ſeem much divided whether they ſhould conſider this as a *Poa* or *Feſtuca*, as it does not appear to us that we ſhould in the leaſt advance our favourite Science by altering its generic name, we have continued that of LINNÆUS, although we are by no means ſatisfied with his generic characters of the Graſſes in general, and are perſuaded that future obſervations and a more accurate attention to the minute parts of their fructification, will place thoſe Genera in a much clearer point of view than has yet been done by any author.

Profeſſor OEDER in his FLORA DANICA, and the celebrated SCHREBER in his AGROSTOGRAPHIA, have both given a figure of this graſs. As we have not ſeen it growing either in Denmark or Germany we cannot ſay that their figures do not expreſs its particular mode of growth in thoſe countries, but they do not convey to us its habit or manner of growing here; in both their figures the Panicle is repreſented quite upright, whereas with us it is always more or leſs inclined; this however is a matter of no great moment, a deviation from nature in the repreſentation of the minute parts of the fructification is a matter of much greater conſequence, and we are ſorry to find that Mr. SCHREBER whoſe knowledge and accuracy can ſeldom be called in queſtion, has not been ſufficiently attentive to all the parts which characterize this ſpecies. He has repreſented the Styles as branched or feathered quite down to the Germen, whereas they are evidently *naked at bottom* and *much branched at top only*; the ſingular Squamula or Scale at the baſe of the Germen he has properly noticed, but the *two little Horns* at the top of the ſeed, which are the remains of the Styles, and which in a peculiar manner diſtinguiſh this important ſeed, he does not remark. In the *Flora Danica* the Styles are likewiſe feathered down to the Germen and the Squamula at the baſe of the Germen wholly omitted.

This Graſs is found to be of conſiderable importance in the œconomy of Nature.

The *Phalæna Feſtucæ* or *Gold Spot Moth*, to which LINNÆUS with great propriety adds the epithet of *pulcherrima*, *(vid. Fauna Suecica. p.* 311. *Albin. pl.* 84. *lit.* E. F. G. H.*)* is ſaid by him to feed on this particular Species; with us however it is always found on a different graſs, viz. the *Poa aquatica* or *large water Poa*; its hiſtory, with the particular manner of finding it we ſhall give under that graſs.

From the obſervations of late writers, it appears that ſeveral ſorts of Cattle are remarkably fond of this graſs, particularly Kine and Hogs, and that in the ſpring time they are frequently enticed into bogs by endeavouring to get at its ſweet young ſhoots, which appear earlier than thoſe of moſt other Graſſes.

"Profeſſor KALM in a journey through part of *Sweden*, obſerved the Swine to go a great way into the water after "this graſs, the leaves of which, they eat with great eagerneſs; on this he was tempted to try if they would eat the "ſame graſs dried; he accordingly had ſmall bundles of it gathered, dried, and caſt before them; the conſequence "was they ate it ſeemingly with as much appetite as horſes do hay, hence he concludes that by cultivating this graſs, "*wet and ſwampy places* might be rendered uſeful, and a great deal of corn, &c. ſaved".

He who introduced the method of feeding hogs in ſummer time on Clover, deſerved very well of his country; and if the hay of this graſs would keep them in heart during the winter, it might prove a very valuable diſcovery.

Mr. Kent in his *hints to Gentlemen of landed property*, lately publiſhed, conſiders this as a moſt valuable graſs, and aſſures us *(p.* 34*)* it is to be improved above all others, and at a leſs expence, merely by flooding; *(p.* 54,*)* he informs us that flooding deſtroys *all weeds*, and enriches the land to a very high degree; *(p.* 56,*)* he ſays as rolling and preſſure *bring* the *annual meadow-graſs*, ſo flooding immediately *begets* the *flote feſcue*. Theſe aſſertions of Mr. Kent beſpeak neither the Philoſopher nor the accurately practical Farmer, they contain an exaggerated account of improving paſture land by a particular proceſs, but ſhow a great want of that minute attention which ſo important a ſubject required.

From a long reſidence in Hampſhire, we well know that the meadows in that county are conſiderably improved by flooding them, that is ſtopping the water when there happens to be an unuſual quantity from violent or long continued rains, and by means of trenches or gripes, conveying the ſurplus water ſo as to overflow them entirely if poſſible; but we deny, that by this proceſs *all weeds* are deſtroyed, the uſe of *manure* ſuperſeded, or that *flote feſcue graſs* is immediately *begotten*. Although it is a conſtant practice with the farmers to flood their meadows in the winter, it is no leſs a conſtant practice with ſuch as wiſh to have good crops of graſs to manure them with dung or aſhes. Flooding can no otherwiſe deſtroy weeds than by altering the ſoil in which they grow, and if it deſtroys one ſet of weeds, it muſt certainly favour the growth of another: if thoſe plants which throve beſt in a dry ſituation are deſtroyed by the alteration which now takes place in the ſoil, thoſe which are fond of a moiſt ſituation will proportionably flouriſh If the *flote feſcue graſs* was immediately produced by flooding, we ſhould find all thoſe meadows which have undergone this operation to contain nothing but this kind of graſs, whereas the richeſt and beſt meadows in Hampſhire contain ſcarce a ſingle blade of it: the fact is, this graſs will not flouriſh in meadow land, unleſs you convert it into a kind of bog or ſwamp, and I believe few landed Gentlemen will think this an improvement, or thank Mr. Kent for giving them ſuch a hint.

"Mr. Stillingfleet informs us that Mr. Deane a very ſenſible Farmer at Ruſcomb, in Berkſhire, aſſured him, that "a field always lying under water of about four acres, that was occupied by his father when he was a boy, was covered "with a kind of graſs that maintained five farm-horſes in good heart from April to the end of harveſt without giving "them any other food, and that it yielded more than they could eat. He at my deſire brought me ſome of the "graſs, which proved to be the *flote feſcue* with a mixture of *marſh bent*; whether this laſt contributes much towards "furniſhing ſo good paſture for horſes I cannot ſay, they both throw out roots at the joints of the ſtalks and therefore "likely to grow to a great length. In the index of dubious plants at the end of *Ray's Synopſis*, there is mention "made of a graſs under the name of *Gramen caninum ſupinum longiſſimum* growing not far from *Saliſbury* twenty-four feet "long; this muſt by its length be a graſs with a creeping ſtalk: and that there is a graſs in Wiltſhire, growing in "watery meadows, ſo valuable that an acre of it lets from ten to twelve pounds, I have been informed by ſeveral "perſons. Theſe circumſtances incline me to think it muſt be the *flote feſcue*; but whatſoever graſs it be it certainly muſt deſerve to be enquired after".

It may not be improper to add, that the account of the extraordinary long graſs above mentioned, was taken by RAY from the *Phytographia Britannica*, which mentions the particular ſpot where it grew, viz. at Mr. Tucker's, at Maddington, nine miles from Saliſbury; it is alſo remarked that *they fat Hogs with it*.

As it is now above a century ſince this enquiry was firſt made, is it not ſurprizing that no ſucceeding Botanic Writer ſhould have acquired ſatisfactory information concerning it? I am promiſed ſpecimens of the roots and ſeeds.

Upon

Upon the whole, from the obſervations which we ourſelves have made on this Graſs and from what is to be collected from Authors, it appears that if it be cultivated to any advantage it muſt be in ſuch meadows as are *naturally very wet and never drained.*

The quickeſt and perhaps the beſt method of propagating it would be by tranſplanting the roots at a proper ſeaſon, and if the ſoil prove ſuitable, from the quickneſs of its growth, and its creeping Stalk, it would ſoon exclude moſt other plants, and produce a plentiful crop.

In foreign countries the ſeed of this Graſs ſeems to be an object of more importance than the graſs itſelf, the following is the ſubſtance of what Mr. SCHREBER has ſaid concerning it, (vid. *Beſchreibung der Graſer p.* 40.) " The ſeed has a ſweet and pleaſant taſte particularly before it comes to its full growth, whence the plant has " acquired the name of *Manna Graſs.* Ducks and other water-fowl feed on it with much eagerneſs (LINNÆUS has " remarked that the Water-fowl are very well acquainted with the method of collecting theſe ſeeds) it has been " obſerved likewiſe that Fiſh are fond of it, and that Trout in particular thrive in thoſe rivers where this graſs grows " in plenty and ſheds its ſeeds ; but it is not only for Birds and Fiſh but alſo for Man a palatable and nutritious " food, and has for many years paſt been known at Gentlemens tables under the name of *Manna-Grout.*

" The Manna Graſs is of two kinds the one *Panicum ſanguinale* or *Cocks-foot Panic-Graſs* the other *Feſtuca fluitans* " which we have now deſcribed ; the former is cultivated in ſeveral parts of Germany, and its ſeed ſomewhat reſem- " bles that of Millet, the latter is collected in great abundance from the plant as it grows wild in *Poland, Lithuania,* " the *new Marche* and about *Franckfort* and other places in *Sileſia* as alſo in *Denmark* and *Sweden* and hence exported " to all parts.

" The common method they make uſe of to gather and prepare this ſeed in *Poland, Pruſſia,* and the *Marche* is " as follows. At ſun riſe the ſeed is gathered or beat from the dewy graſs into a horſe-hair ſieve, and when a " tolerable quantity is collected, it is ſpread on a ſheet and dried fourteen days in the ſun ; it is then thrown into " a kind of wooden trough or mortar, ſtraw or reeds laid betwen it, and beat gently with a wooden Peſtle ſo as to " take off the chaff and then winnowed. After this it is again put into the mortar, in rows, with dried Marygold- " flowers, Apple, and Hazel leaves, and pounded until the Huſk is entirely ſeparated and the ſeed appears bright, " it is then winnowed again, and when it is by this laſt proceſs made perfectly clean it is fit for uſe. The Mary- " golds are added with a view to give the ſeeds a finer colour. The moſt proper time for collecting them is in July. " A Buſhel of the ſeed and chaff, yields about two quarts of clean ſeed.

" When boiled with milk or wine they form an extremely palatable food, and are moſt commonly made uſe of " whole in the manner of *Sago* to which they are in general preferred.

In the month of *October* laſt, I diſcovered in a watery ditch, which runs through a meadow not far from Kent-Street Road an uncommon appearance in ſome of the ſeeds of this graſs, and on a farther examination, I found whole Panicles the ſeeds of which were affected in a ſimilar manner, inſtead of being of their natural ſize, and colour, they were enlarged to a very great degree, aſſumed externally a blackiſh colour, and were more or leſs incurvated. Struck with the novelty as well as oddity of the appearance I conjectured at firſt that it was a diſeaſe occaſioned by ſome Inſect, I examined it more attentively, but could not find the leaſt cauſe to ſuppoſe that an Inſect had been concerned in it. The ſurface of ſome of theſe ſeeds was rough, and chopped, they were light as to weight, internally of a whitiſh colour, inſiped in their taſte but not diſagreeable. Having a little before this been favoured with a ſight of ſome *horned Rie* it now occurred to me that this was the ſame diſeaſe which had been ſaid to affect the *Rie* only, and farther enquiry confirmed my conjecture.

As this ſingular diſeaſe of the Rie has firſt been noticed by the French, and as ſome very uncommon circumſtances have attended it, it cannot fail of proving acceptable to our readers to lay before them the ſubſtance of what they have ſaid concerning it. In the *Hiſtoire de L'Academie royale des Sciences* there is an account given of a particular ſpecies of Gangrene or Mortification which attacked many perſons in ſome particular provinces of France. " It began generally at the toes and ſometimes ſpread as high as the thigh. Out of fifty people there was but " one that was attacked with this diſeaſe in the hands and what was equally remarkable there were no females " affected with it except ſome little Girls.

" It appears that this ſingular malady attacked only the lower ſort of people, and that too in years of ſcarcity, " that it proceeded from bad nouriſhment, and principally from eating bread made of a certain black and diſeaſed " corn called *Ergot*, from the grains aſſuming ſomewhat of the form of a Cocks Spur. *vid. fig.* 12.

" The manner in which this ſingular monſtroſity of the Corn is produced is thus related by Monſieur FAGON.

" There are certain miſts which prove injurious to the corn, and from which the greateſt part of the Ears of the " Rie defend themſelves by their beards. In thoſe however which this hurtful humidity can ſtrike and penetrate, " it rots the ſkin which covers the grain, blackens it, and alters the ſubſtance of the grain itſelf, the juices which " form the ſeed being no longer kept within their ordinary bounds by the ſkin, are carried hither in two great an " abundance and amaſſing themſelves irregularly form this monſtrous appearance.

" He obſerves that it is *only in Rie* that the *Ergot* is to be found, that the poor people do not ſeparate this grain " from that which is good, that it was only in ſuch particular ſeaſons as favoured the growth of the *Ergot* that " this diſeaſe was prevalent, that the country people after eating bread made of this bad corn perceived themſelves " as if drunk, and after this the mortification generally took place, that in ſome provinces were there was but little " of this Ergot this ſpecies of diſeaſe was not known.

" From the obſervations made by the Farmers of that country it appears that this bad ſpecies of grain is pro- " duced in the greateſt abundance in ſuch land as is wet and cold, and particularly in rainy ſeaſons. The Poultry " refuſed it when given them, nevertheleſs if by accident they had eaten it they did not appear to be hurt by it. " When ſown (as might be expected) it did not vegetate. "

A kind of mortification very ſimilar to the above deſcribed was obſerved in this Kingdom ſome years ago; it affected the ſame kind of people and on enquiry it was found that they had fared very hard, and that the bread which they had eaten was made of the *tailings* or *ſcreenings* of Corn, but it was not aſcertained whether it contained any of the Ergot or not.

From the inſipid taſte of this corn, as well as from its not proving fatal to Poultry, it ſeems exceedingly probable that it is not in itſelf noxious, any otherwiſe than as it affords no nouriſhment; and that thoſe people who have eaten of this corn, have in fact been abridged of a proportionate quantity of food, hence from an impoveriſhed ſtate of the fluids and a weak action of the veſſels this ſpecies of Mortification might eaſily be induced.

BROMUS MOLLIS. SOFT BROME GRASS.

BROMUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

BROMUS *mollis* panicula erectiuſcula, ſpiculis ovatis pubeſcentibus, ariſtis rectis, foliis molliſſime villoſis

Linnæi Syſt. Vegetab. p. 102. *Sp. Pl. p.* 112.

BROMUS hirſutus, locuſtis ſeptifloris, ovato conicis. *Haller hiſt. p.* 1504.

BROMUS Polymorphus. *Scopoli Fl. Carniol. p.* 80.

FESTUCA avenacea hirſuta, paniculis minus ſparſis. *Raii Synop. p.* 413 *Hudſon Fl. Angl. p.* 39. *n.*

Secalinus. *Schreber. Gram. pl.* 6. *fig.* 1.

RADIX biennis *

CULMUS pedalis ad tripedalem, erectus; GENICULI tumidi, cylindracei.

FOLIA cum VAGINIS pilis mollibus veſtita.

PANICULA erectiuſcula, nunc coarctata nunc diffuſa.

SPICULÆ *ovato-acutæ*, turgidæ, ſubcompreſſæ, plerumque villoſæ, octofloræ, circa oras glumarum albidæ. *fig.* 1.

CALYX: GLUMA bivalvis, valvulis inæqualibus, muticis. *fig.* 2.

COROLLA: GLUMA bivalvis, valvulâ exteriore lata, concava, ſtriata, ariſtata, *fig.* 4. interiore planiuſcula, *ciliata*, lanceolata. *fig.* 3. ARISTA valvulis paulo longior, ſubrecta, *fig.* 4.

NECTARIUM: Glumula bipartita, ad baſin petali interioris, *fig.* 5, parum auct:

STAMINA: FILAMENTA tria capillaria, ANTHERÆ primum flavæ, oblongæ, dein fuſcæ et bifurcatæ. *fig.* 7. 6. auct:

PISTILLUM: GERMEN ovatum, apice ſubemarginatum, *fig.* 8. STYLI duo, ad baſin uſque plumoſi, *ex uno latere germinis enati. fig.* 9.

SEMEN oblongum, concavum, calyci adnatum *fig.* 10. denudatum *fig.* 11.

ROOT biennial *

STALK from one to three feet high, upright; the JOINTS ſwelled and cylindrical.

LEAVES together with their SHEATHS covered with ſoft hairs.

PANICLE nearly upright, ſometimes cloſe, ſometimes ſpreading.

SPICULÆ *oval and pointed*, turgid, flattiſh, generally villous, containing eight flowers, whitiſh about the edges of the Glumes. *fig.* 1.

CALYX: a GLUME of two valves, the valves unequal without any beard, or ariſta, *fig.* 2.

COROLLA: a GLUME of two valves, the outermoſt valve broad, hollow, ſtriated, and bearded, *fig.* 4; the innermoſt flattiſh, *ciliated or hairy at the edges* and pointed, *fig.* 3; the ARISTA a little longer than the valves and nearly ſtraight, *fig.* 4.

NECTARIUM: a ſmall kind of Glume deeply divided, placed at the baſe of the inner petal, *fig.* 5. a little magnified.

STAMINA: three FILAMENTS very ſmall, ANTHERS firſt yellow and oblong, laſtly brown and forked at each end, *fig.* 7. 6. magnified.

PISTILLUM: GERMEN oval, with a ſlight depreſſion at top, *fig.* 8. two STYLES feathery quite down to the bottom, *proceeding from one ſide of the Germen, fig.* 9.

SEED oblong, concave, adhering to the Calyx *fig.* 10. the Calyx taken off, *fig.* 11.

OUR Farmers in general are not very warm in their recommendations of this Graſs, nevertheleſs it abounds in moſt of our beſt meadows; it ſprings up early, and ripens its ſeed generally about the time of Hay-making. The ſeed is large, and each panicle contains nearly as much as that of a common Oat, indeed it ſeems to have more pretenſions to the the name of Corn than of Graſs.

Although Cattle may not be ſo fond of the leaves, and panicle of this Graſs while green as of ſome others, yet may it not (when cut down as it uſually is when the ſeed is nearly ripe) contribute to render the hay more nutritive? and hence may it not be a proper Graſs to ſow with others.? It ſeems at leaſt to deſerve the attention of the Farmer.

There is perhaps no claſs of plants more affected by difference of ſoil and ſituation than the Graſſes, hence the ſame plant has often been divided into ſeveral ſpecies; and to ſuch Varieties is the preſent Plant incident, as to occaſion SCOPOLI to give it the name of *Polymorphus*.

When it grows on a Wall, or dry Bank, the Spiculæ are generally more upright, and cloſer together; when the ſoil is rich and moiſt, the Spiculæ ſpread out, and the whole plant becomes much larger; in Meadows the Spiculæ frequently loſe their villous appearance and become perfectly ſmooth. To determine this ſpecies then with more certainty, recourſe muſt be had to the parts of fructification.

* According to Linnæus.

9

Bromus sterilis

BROMUS STERILIS. BARREN BROME GRASS.

BROMUS *Linnæi. Gen. Pl.* TRIANDRIA DIGYNIA.

Raii Gen. 27. HERBÆ GRAMINIFOLIÆ, FLORE IMPERFECTO CULMIFERÆ.

BROMUS *ſterilis*, panicula patula, ſpiculis oblongis diſtichis, glumis ſubulato-ariſtatis. *Lin. Syſt. Vegetab. p.* 103.

BROMUS panicula nutante; locuſtis ſeptifloris; glumis argute lanceolatis, lineatis, ſubhirſutis. *Haller. hiſt. n.* 1505.

FESTUCA avenacea ſterilis elatior. *Bauhin. pin.* 9. 10.

BROMOS herba, ſive avena ſterilis. *Parkinſon*, 1147. Bromos ſterilis. *Gerard. emac. Raii Synop. p.* 412. Great wild Oat-Graſs or Drank. *Hudſon. Fl. Angl. p.* 40. *Scopoli. Fl. Carniol. p.* 78.

RADIX fibroſa.

CULMI pedales ad bipedales, ſuberecti, teretes, læves, ad baſin infracti; Geniculi tumidi.

FOLIA longa, plana, unâ cum vaginis molliſſime villoſa.

PANICULA magna, nutans; PEDUNCULI plerumque ſimplices, *ad baſin tumidi.*

SPICULÆ biunciales, ſubcompreſſæ, apice divergentes, *fig.* 1.

CALYX: GLUMA bivalvis, Valvulis inæqualibus lineari-lanceolatis, *fig.* 2.

COROLLA: bivalvis, Valvulis inæqualibus, exteriore longiore, concava, ſtriata, apice membranacea, bifida, ARISTA recta Corollâ duplo longiore terminata, *fig.* 3. Valvulâ interiore planiuſcula, ciliata, *fig.* 4.

NECTARIUM: GLUMULÆ duæ acuminatæ, ad baſin biglanduloſæ, *fig.* 6.

STAMINA: FILAMENTA tria, capillaria, ANTHERÆ flavæ, *fig.* 5.

PISTILLUM: GERMEN oblongum, apice truncatum ſive emarginatum, pars inferior ex quâ ſtyli prodeunt et quod verum Germen eſſe videtur, nitida, *fig* 7. pars ſuperior albida, villoſa, *fig.* 8. STYLI duo plumoſi, patuli, *fig.* 9.

SEMEN ex purpureo-fuſcum, oblongum, ariſtatum, calyce tectum, *fig.* 10, denudatum, *fig.* 11.

ROOT fibrous.

STALKS from one to two feet high, nearly upright, round and ſmooth, at bottom crooked or elbowed; the Joints ſwelled.

LEAVES long and flat, covered, together with their ſheaths with ſoft ſhort hairs.

PANICLE large, and drooping, the PEDUNCLES generally ſimple, and *ſwelled at their baſe.*

SPICULÆ about two inches long, flattiſh and diverging toward the extremity, *fig.* 1.

CALYX: a GLUME of two Valves, the valves inequal, long and narrow, *fig.* 2.

COROLLA: compoſed of two Valves, which are inequal, the exterior Valve longeſt, concave, ſtriated, at top membranous and bifid, terminated by a ſtraight ARISTA twice the length of the Corolla, *fig.* 3. the interior Valve nearly flat, and ciliated, *fig.* 4.

NECTARY: two ſmall long-pointed GLUMES with a ſmall gland at the baſe of each, *fig.* 6.

STAMINA: three ſmall FILAMENTS: the ANTHERÆ yellow, *fig.* 5.

PISTILLUM: the GERMEN oblong, at top flat or ſlightly emarginate, the bottom part from whence the Styles proceed, and which ſeems to be the true Germen, is ſmooth and ſhining, *fig.* 7. the upper part white and villous, *fig.* 8. two STYLES, feathery and ſpreading, *fig.* 9.

SEED of a purpliſh brown colour, oblong, bearded, encloſed within the Calyx, *fig.* 10. the Calyx ſtripped off, *fig.* 11.

Much praiſe is due to the late ingenious Mr. STILLINGFLEET for his attempts to introduce, more generally among Farmers, a knowledge of our moſt uſeful Engliſh Graſſes: his obſervations on this ſubject are ſo exceedingly pertinent that the inſertion of them cannot fail to prove highly acceptable to ſuch as have the promotion of Agriculture at heart.

" It is wonderfull to ſee how long mankind has neglected to make a proper advantage of plants of ſuch importance, " and which in almoſt every country are the chief food of cattle. The farmer for want of diſtinguiſhing, and ſelecting " graſſes for ſeed, fills his paſture either with weeds, or bad, or improper graſſes; when by making a right choice, " after ſome trials he might be ſure of the beſt graſs, and in the greateſt abundance that his land admits of. At preſent " if a farmer wants to lay down his land to graſs, what does he do? he either takes his ſeeds indiſcriminately from " his own foul hay-rick, or ſends to his next neighbour for a ſupply. By this means, beſides a certain mixture of all " ſorts of rubbiſh, which muſt neceſſarily happen; if he chances to have a large proportion of good ſeeds, it is not " unlikely, but that what he intends for dry land may come from moiſt, where it grows naturally, and the contrary. " This is ſuch a ſlovenly method of proceeding, as one would think could not poſſibly prevail univerſally; yet this " is the caſe as to all graſſes except the darnel graſs, and what is known in ſome few countries by the name of the " Suffolk graſs; and this latter inſtance is owing, I believe, more to the ſoil than any care of the huſbandman. " Now would the farmer be at the pains of ſeparating once in his life half a pint, or a pint of the different kinds of " graſs ſeeds, and take care to ſow them ſeparately; in a very little time he would have wherewithal to ſtock his " farm properly, according to the nature of each ſoil, and might at the ſame time ſpread theſe ſeeds ſeparately over " the nation by ſupplying the ſeed-ſhops. The number of graſſes fit for the farmer is, I believe ſmall; perhaps half " a dozen, or half a ſcore are all he need to cultivate; and how ſmall the trouble would be of ſuch a taſk, and how " great the benefit, muſt be obvious to every one at firſt ſight. Would not any one be looked on as wild who ſhould " ſow *wheat*, *barley*, *oats*, *rye*, *peaſe*, *beans*, *vetches*, *buck-wheat*, *turnips* and weeds of all ſorts together? yet how is it " much leſs abſurd to do what is equivalent in relation to graſſes? does it not import the farmer to have good hay " and graſs in plenty? and will cattle thrive equally on all ſorts of food? we know the contrary. Horſes will " ſcarcely eat hay, that will do well enough for oxen and cows. Sheep are particularly fond of one ſort of graſs, " and fatten upon it faſter, than on any other in Sweden, if we may give credit to Linnæus. And may they not do " the ſame in England? How ſhall we know till we have tried? Nor can we ſay that what is valuable in Sweden " may be inferior to many other graſſes in England; ſince it appears by the Flora Suecica that they have all the " good ones that we have. But however this may be I ſhould rather chuſe to make experiments, than conjectures."

The preſent Graſs is not one of thoſe which are worth the Farmer's cultivation, but ſo much the reverſe, that moſt Authors have called it *ſterilis*, not becauſe it is really barren but from its inutility with reſpect to Cattle.

It grows exceeding common under hedges and flowers in May and June.

In order to have a clear idea of the ſtructure of the parts of fructification in the Graſſes, they ſhould be examined juſt at the time, or rather before the *Antheræ* have diſcharged their *Pollen*, a ſmall ſpace of time makes a conſiderable alteration in their appearance.

In this ſpecies of *Bromus* as well as in the *Bromus mollis* the Styles proceed from the *middle* of the Germen and not from the *top*, this is a peculiarity which ſeems to have eſcaped the notice of *Schreber* who has written profeſſedly on the Graſſes, and examined them with more accuracy than any preceding Writer. In his figures the *Styles* proceed always from the Apex of the *Germen*.

10

Dipsacus pilosus.

DIPSACUS PILOSUS. SMALL WILD TEASEL OR SHEPHERD'S ROD.

DIPSACUS *Linnæi Gen. Pl.* TETRANDRIA MONOGYNIA.

Calyx communis polyphyllus; proprius ſuperus. *Receptaculum* paleaceum.

Raii Syn. p. 191. HERBÆ CORYMBIFERIS AFFINES.

DIPSACUS *piloſus* foliis petiolatis appendiculatis. *Linn. Syſt. Vegetab. p.* 120. *Spec. Plant.* 141.

DIPSACUS foliis biauribus, capitulis hemiſphæricis. *Haller. hiſt. helv. No.* 199.

DIPSACUS ſylveſtris capitulo minore vel virga paſtoris minor. *Bauhin Pin. p.* 385.

DIPSACUS minor ſeu Virga paſtoris. *Ger. emac.* 1168.

VIRGA PASTORIS. *Parkinſon* 984. *Raii Synop. p.* 192. *Hudſon. Fl. Angl. p.* 49.

RADIX biennis.

CAULIS orgyalis, erectus, ramoſiſſimus, pene teres, aculeatus, ſulcatus.

RAMI oppoſiti, patentes, cauli ſimiles.

FOLIA ad *baſin* CAULIS, connata, ovato-lanceolata, ſerrata, nervo medio ſubtus aculeato, *indiviſa*, *ſuprema* appendiculata; RAMORUM; *ima* appendiculata, ſerrata, *ſuprema* margine integerrima, lanceolata.

PEDUNCULI erecti, longi, ex dichotomiâ caulis, ſulcati, aculeati, apice ſpinoſiſſimi, uniflori.

FLORES albidi, in capitulum hemiſphæricum collecti, dum florent nutantes, poſtea capitula eriguntur.

CALYX: PERIANTHIUM *commune* multiflorum, hexaphyllum, foliolis longitudine florum, patentibus, lanceolatis, mucronatis, *fig.* 1: PERIANTHIUM *proprium* parvum, ſuperum, concavum, ciliatum, *fig.* 5. lente auctum.

COROLLA *propria* monopetala, tubuloſa, limbo qudrifido, laciniâ inferiore longiore, *fig.* 3.

STAMINA: FILAMENTA quatuor Corollâ longiora; ANTHERÆ purpureæ, *fig.* 3.

PISTILLUM: GERMEN inferum, tetragonum; STYLUS filiformis, longitudine Corollæ; STIGMA ſimplex, *fig.* 6.

PERICARPIUM nullum.

SEMINA fuſca, ſubtetragona. *fig.* 4.

RECEPTACULUM commune hemiſphæricum, paleaceum, pars inferior palearum concava, alba, carinata, ſuperior lanceolata, acuminata, ſpinulis obſita. *fig.* 2.

ROOT biennial.

STALK about ſix feet high, upright, very much branched, nearly round, prickly and grooved.

BRANCHES oppoſite, ſpreading, like the ſtalk.

LEAVES *at the bottom of the* STALK connate, ovato-lanceolate, ſerrated, the midrib prickly underneath, *undivided*, thoſe at the *top* dividing at the baſe into two ſmaller leaves; the leaves on *the branches* at *bottom* ſimilar to thoſe laſt deſcribed, at *top* lanceolate, with the edges entire.

FOOT-STALKS of the flowers, upright, long, proceeding from the middle where the ſtalks ſeparate, grooved, prickly, at top very full of ſlender ſpines, ſupporting one flower.

FLOWERS whitiſh, collected together in a ſmall hemiſpherical head, which, while the plant is in flower, droops, and afterwards becomes upright.

CALYX: the *common* PERIANTHIUM ſupporting many flowers, compoſed of ſix leaves, the length of the flowers, ſpreading, lanceolate and pointed, *fig.* 1. The PERIANTHIUM of *each floſcule* ſmall, placed above the Germen, hollow, and ciliated, *fig.* 5, magnified.

COROLLA: *each floſcule* monopetalous, tubular, the limb quadrifid, the lowermoſt ſegment longeſt, *fig.* 3.

STAMINA: four FILAMENTS, longer than the Corolla; ANTHERÆ purple, *fig.* 3.

PISTILLUM: GERMEN placed below the Calyx, quadrangular; the STYLE filiform, the length of Corolla; the STIGMA ſimple, *fig.* 6.

SEED-VESSEL wanting.

SEEDS brown, nearly quadrangular.

RECEPTACLE common to all the flowers paleaceous; the lower part of the paleæ hollow, white, and angular behind; the upper part lanceolate, tapering to a point, and beſet with little ſpines or hairs, *fig.* 2.

THIS ſpecies of *Teaſel* may be conſidered as one of our Plantæ rariores; hitherto I have found it only in one place near town, viz. on the right hand ſide of the Turnpike-road leading from *Deptford* to *Lewiſham*s not far from the latter: as it grows to a conſiderable height, it is conſpicuous at a diſtance: the flower, appear in July, and the ſeed is ripe in September: it continues to blow for a conſiderable time, and did not the plant take up ſo much room, there is beauty enough in its flowers to recommend it for the Garden.

Moths ſeem very fond of its bloſſoms, being found on them in great numbers after ſun-ſet.

This is found in great quantity near Stapleton Lodge
&c 6/- Hounſlow & ſides of the Roads & Lanes about the Town & Lon[illegible] H 6 H
Lewiſham &c. Abby Fields Chiſwick &c Curtis

HOTTONIA PALUSTRIS. WATER HOTTONIA, OR WATER VIOLET.

HOTTONIA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

HOTTONIA *paluſtris*, pedunculis verticillato-multifloris. *Lin. Syſt. Vegetab.* 164.

HOTTONIA florum verticillis ſpicatis. *Haller. hiſt. n.* 632.

MILLEFOLIUM aquaticum ſeu Viola aquatica, caule nudo. *Bauhin. pin.* 141. *Parkinſon*, 1256.

VIOLA paluſtris. *Gerard. emac.* 826. *Raii Syn. p.* 285. *Hudſon. Fl. Angl. p.* 72. *Scopoli Fl. Carniol. n.* 213. *Fl. Dan. icon.* 487.

RADIX e plurimis fibrillis capillaceis albis conſtat, quæ in limum profunde dimittuntur.

ROOT conſiſts of numerous white capillary fibres, which penetrate deep into the mud.

CAULIS ſive SCAPUS floriferus, pedalis, ſimplex, erectus, multiflorus, verſus apicem glandulis ſcabriuſculus, ad baſin foliis plurimis inſtructus, unde per aquam longe excurrunt caules plures qui fibrillas dimittunt.

STALK or flowering SCAPUS, a foot high, ſimple, upright, ſuſtaining many flowers, towards the top roughiſh with little glands, furniſhed at bottom with numerous leaves, from whence ſeveral ſtalks proceed and run out to a conſiderable length through the water throwing out numerous white fibres.

FOLIA plurima, plerumque immerſa, pinnata, in apicibus caulium juniorum denſa, reflexa, Pinnis linearibus planis.

LEAVES numerous, generally under the water, pinnated, growing in tufts on the tops of the young ſtalks, bending downwards, the Pinnæ linear and flat.

FLORES pallide purpurei, verticillati, ſpicati, Pedunculi ad. 10, Bractæâ, ad baſin inſtructi, poſt floreſcentiam reflexi.

FLOWERS of a pale purple colour, growing in whirls, and forming a ſpike. Peduncles to 10 in number, furniſhed at bottom with a Bractæa, when the flowers are gone off turning downwards.

CALYX: PERIANTHIUM monophyllum, quinquepartitum: LACINIIS linearibus, erecto-patulis, *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, divided into five SEGMENTS, which are linear, upright and ſomewhat ſpreading, *fig.* 1.

COROLLA: monopetala, hypocrateriformis, TUBUS longitudine calycis, LIMBUS quinquefidus, planus: LACINIIS ovato-oblongis, emarginatis, *fig.* 2.

COROLLA: monopetalous and ſalver-ſhaped, the TUBE the length of the calyx; the LIMB divided into five ſegments and flat; the SEGMENTS of an oval oblong ſhape with a notch at the extremity, *fig.* 2.

STAMINA: FILAMENTA quinque, ſubulata, brevia, erecta. ANTHERÆ oblongæ, flavæ. *fig.* 3.

STAMINA: five FILAMENTS tapering, ſhort, and upright, ANTHERÆ oblong and yellow, *fig.* 3.

PISTILLUM: GERMEN ſubgloboſum. STYLUS filiformis, brevis. STIGMA globoſum, *fig.* 4.

PISTILLUM: GERMEN roundiſh, STYLE thread-ſhaped and ſhort, STIGMA ſpherical, *fig.* 4.

PERICARPIUM: CAPSULA globoſa, unilocularis, ſubpellucida, *fig.* 5.

SEED-VESSEL: a round CAPSULE of one cavity, ſlightly tranſparent, *fig.* 5.

SEMINA plurima, ovata, pallide fuſca, *fig.* 7. receptaculo globoſo intra capſulam affixa, *fig.* 6.

SEEDS numerous, oval, of a pale brown colour, *fig.* 7: affixed to a round receptacle within the capſule, *fig.* 6.

This ſingular plant abounds in moſt of our watry Ditches, particularly in ſuch as divide the Meadows, and flowers in May and June, continuing for a conſiderable time in bloſſom; among a variety of other places it may be found in a ditch on the right hand ſide of the Field Way leading from Kent-ſtreet Road to Peckham.

We do not find any author that mentions its poſſeſſing any properties to recommend it but its beauty and ſingularity, both of which it poſſeſſes in a degree ſufficient to command our admiration.

The leaves generally grow beneath the ſurface of the water and afford a Nidus if not Nouriſhment to the freſh-water Periwinkle and ſome other ſmall ſhell fiſh.

Antient Botaniſts have given it the names of *Millefolium aquaticum*, and *Viola aquatica*; the great number of its leaves induced them, with ſome propriety, to call it *Millefolium*, but why they ſhould call it a *Viola* ſeems difficult to determine, as the bloſſom has nothing in its ſtructure ſimilar to the flowers of that Genus. Boerhave afterwards called it *Hottonia*, in honour of Dr. Hotton, which name Linnæus has continued.

I found it in this ſituation June 1817
H C Hanford

Hottonia palustris.

T. Williams Lamond del. et sculpt.

ANAGALLIS ARVENSIS. PIMPERNEL.

ANAGALLIS *Linnæi Gen. Plant.* PENTANDRIA MONOGYNIA.

Raii Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

ANAGALLIS foliis indivisis caule procumbente. *Lin. Spec. Plant.* 211.

ANAGALLIS phœniceo flore. *Bauhin. pin.* 252.

ANAGALLIS mas *Fuschii* 18. *Gerard emac.* 617. *Parkinson* 558. *Oeder. Flor. Dan. tab.* 88. *Raii Syn.* 282. *Hudson.* 73. *Haller. hist.* 621. 626. *Scopoli. Fl. Carniol.* 139.

RADIX simplex, fibrosa, annua.

CAULIS ramosus, prostratus, quadrangularis, lævis, subtortuosus, *fig.* 1.

FOLIA opposita, sessilia, cordata, glabra, *subtus punctis fuscis notata.*

PEDUNCULI oppositi, foliis fere duplo longiores, inflexi.

CALYX persistens, quinquepartitus, segmentis triangularibus, alatis, membranaceis, *fig.* 2.

COROLLA monopetala, quinquepartita, laciniis rotundis, coccineis, ad basin purpureis, margine crenatis, subpilosis, *fig.* 3. 4.

STAMINA. FILAMENTA quinque, erecta, *pilosissima, (pili articulati!)* superne purpurea. ANTHERÆ oblongæ, biloculares, flavæ, insidentes, *fig.* 5. 6.

PISTILLUM. GERMEN rotundum, STYLUS filiformis, *obliquus*, longitudine filamentorum; STIGMA subrotundum, *extra circulum staminum locatum*, *fig.* 7.

PERICARPIUM. CAPSULA rotunda, nitida, quinquenervia, subdiaphana, circumscissa, fusca. *fig.* 8.

SEMINA plurima, angulosa, fusca, *fig.* 9.

ROOT simple, fibrous, annual.

STALK branched, procumbent, quadrangular, smooth, and a little twisted, *fig.* 1.

LEAVES opposite, sessile, heart-shaped, smooth, *underneath dotted with brown.*

PEDUNCLES opposite, nearly twice the length of the leaves, bending downwards.

CALYX persisting, divided into five Segments, the Segments triangular and membranous at the edges, *fig.* 2.

COROLLA monopetalous, quinquepartite, the laciniæ scarlet purplish at bottom, the edges slightly notched, and hairy, *fig.* 3. 4.

STAMINA. five FILAMENTS upright and *very hairy (the hairs when magnified jointed!)* at top purplish: The ANTHERÆ oblong, bilocular, yellow, and sitting on the filaments, *fig.* 5. 6.

PISTILLUM. the GERMEN round, the STYLE filiform, the length of the filaments, the STIGMA roundish, *placed without the circle of the Stamina*, *fig.* 7.

SEED-VESSELL. a CAPSULE, round, shining, brown, slightly transparent, having five nerves, dividing into two equal parts, *fig.* 8.

SEEDS numerous, brown, and angular, *fig.* 9.

NATURE seems to have taken uncommon pains in the formation of the Flowers of this little Plant; few possess more liveliness of colour or greater delicacy of structure, this must be sufficiently obvious to every common observer, but when its minute parts come to be viewed by the microscope, we are charmed with beauties altogether novel and unexpected; we then find that the edges of the flowers, which to the naked eye appear a little uneven or hairy, are furnished with a number of little glands placed on footstalks, and that the hairs of the Filaments which partly tend to distinguish this Genus, are regularly jointed: the Pistillum which generally arises upright betwixt the Stamina, is here inclined to one side, so that the Stigma is placed without the circle of the Stamina: The care which Nature has taken likewise in the preservation of these delicate parts from the injury of the weather, is not less remarkable. Every morning, if the weather be fair and warm, the blossoms fully expand, but if rain falls, or there be much moisture in the air, the flowers quickly close themselves up to secure the inclosed Antheræ and Stigma, from having their functions destroyed: from this property which it has in common with many plants of the same class, it has acquired the name of the *Shepherd*'s, or *Poor Man*'s *Weather-glass*,—they have remarked that if the flowers be open in a morning it will prove a fine day, if shut, the contrary.

The small birds (PASSERES LINNÆI) are fond of the seeds of this Plant; and according to experiments made by some of LINNÆUS's pupils, it appears that kine and goats feed on it.

It is very common in corn fields and gardens, flowering all the Summer.

A variety with four leaves at a joint sometimes occurs in rich soil; but as it differs in no other part, and is a mere variety, it scarcely deserves a distinct figure. It is also found with blue and sometimes with white flowers, but we have not observed either of these varieties near London.

Anagallis arvensis.

CONVOLVULUS SEPIUM. LARGE WHITE CONVOLVULUS OR GREAT BINDWEED.

CONVOLVULUS *Linnæi. Gen. Pl.* PENTANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CONVOLVULUS *(sepium)* foliis sagittatis, postice truncatis, pedunculis tetragonis, unifloris. *Linn. Syst. Vegetab. p.* 168. *Fl. Suecic. p.* 64.

CONVOLVULUS foliis sagittatis, hamis emarginatis, angulosis, petiolis unifloris, stipulis cordatis maximis. *Haller. hist. V.* 1. *p.* 295.

CONVOLVULUS Major albus. *Bauhin. pin.* 294.

SMILAX lævis major. *Gerard emac.* 861. *Parkinson.* 163. *Raii Syn. p.* 275. Great Bindweed. *Hudson. Fl. Angl. p.* 74. *Scopoli. Fl. Carniol.* 141. *Fl. Dan. icon.* 458.

RADIX perennis, crassitie pennæ anserinæ, alba, sub terra reptans et late se propagans, vix eradicanda, Hortorum pestis.

CAULES numerosi, volubiles, tortuosi, striati, orgyales, subramosi.

RAMI pauci, alterni, cauli similes.

FOLIA alterna, sagittata, postice truncata, glabra, petiolata.

PEDUNCULI uniflori, alterni, tetragoni.

CALYX INVOLUCRUM biphyllum, foliolis oblongo-cordatis, subcarinatis, venosis, purpurascentibus. *fig.* 2.

CALYX PERIANTHIUM pentaphyllum, tubulosum, foliolis ovato-lanceolatis, pallide virentibus. *fig.* 1.

COROLLA monopetala, infundibuliformis, lactea, limbo lato, obscure diviso, paululum reflexo.

STAMINA: FILAMENTA quinque, fundo corollæ inserta, hirsuta, alba, subulata; ANTHERÆ sagittatæ, albæ, insidentes. *fig.* 3.

PISTILLUM: GERMEN subovatum; STYLUS subulatus apice tortuosus; STIGMA bifidum. *fig.* 4. 5.

NECTARIUM: Glandula crocea annuliformis ad basin Germinis.

PERICARPIUM: CAPSULA subrotunda, fuliginosa, mucronata *fig.* 6. 7.

SEMINA angulosa, fusca, Cotyledonibus mire convolutis. *fig.* 8. 9.

ROOT perennial, about the thickness of a goose quill, of a white colour, creeping under the ground and propagating itself exceedingly, rooted out with the greatest difficulty, and hence very troublesome in Gardens.

STALKS numerous, twining, twisted, striated, generally about six feet high and somewhat branched.

BRANCHES few, alternate, like the Stalk.

LEAVES alternate, arrow-shaped, apparently cut off behind, smooth, and placed on foot-stalks.

FOOT-STALKS of the flowers, alternate, supporting one flower only, and four square.

CALYX an INVOLUCRUM composed of two heart-shaped leaves, slightly keel-shaped, veiny, and purplish. *fig.* 2.

CALYX a PERIANTHIUM, composed of five leaves and tubular, the leaves of an oval pointed shape and pale green colour. *fig.* 1.

COROLLA monopetalous, funnel shaped, of a white colour, the limb broad, obscurely divided, and turned back a little.

STAMINA: five FILAMENTS inserted into the bottom of the corolla, slightly hairy, white and tapering, the ANTHERÆ arrow shaped, white, and sitting on the filaments. *fig.* 3.

PISTILLUM: GERMEN somewhat oval, STYLE tapering, twisted at top; the STIGMA bifid. *fig.* 4 .5.

NECTARY a yellow gland surrounding the base of the Germen.

SEED-VESSEL a roundish CAPSULE of a sooty colour and pointed. *fig,* 9. 7.

SEEDS angular and brown, the Cotyledons folded up in a very singular manner. *fig.* 8. 9.

The plant which produces the *Scammony* is a species of Convolvulus, very similar to that which we have now described, hence Dr. Cullen and some other Physicians have conjectured that our Convolvulus might possess similar properties, but if it should be found to contain such properties, the smallness of it roots would prevent its juice from being collected in the same manner with that which flows on incision from the large root of the Scammony plant, and which hardens and forms that purgative substance. Whether an extract made from the expressed juice of the roots, or any other preparation of them might possess a purgative property, or if it should, whether such a purgative would be so far superior to any now in general use as to introduce it deservedly into practice, is what we cannot pretend to decide on. Hogs are said to eat and even to be fond of the roots.

It grows exceedingly common in our hedges, and flowers in August and September. Where it has once gained ground it is with the greatest difficulty eradicated: was it not for this property and its being so common, it would doubtless be considered, as it really is, a very ornamental plant.

My ingenious Friend Mr. CHURCH, Surgeon, at Islington, (who has taken much pains to collect and acquire a knowledge of our English Insects) informs me that the Caterpillar of the *Phalæna Vibicaria* or *Bloody vein Moth, (vid. Clerc. Phalæn. pl.* 3. *fig.* 2.) feeds on this plant, and the *Sphinx Convolvuli* or *Unicorn Hawk Moth, (vid. Roesel. Cl.* 1. *pap. noct. t.* 7.) is well known to take its name from feeding on this plant also.

Convolvulus Sepium.

Tilburra pinx.t Sculp.t

14

Solanum Dulcamara.

SOLANUM DULCAMARA. WOODY NIGHTSHADE.

SOLANUM *Linnæi Gen. Pl.*. PENTANDRIA MONOGYNIA.

Raii Gen. 16. HERBÆ BACCIFERÆ.

SOLANUM *Dulcamara* caule inermi fruteſcente flexuoſo, foliis ſuperioribus haſtatis, racemis cymoſis. *Lin. Sp. Pl.* 264.

SOLANUM Scandens ſeu Dulcamara *Bauhin. Pin.* 176. Amara Dulcis. *Gerard. emac.* 350. Solanum lignoſum *Parkinſon.* 350. *Raii Synopſis* 265. *Hudſon. Flor. Angl.* p. 78. *Scopoli Flor. Carniol.* p. 161. *Haller. hiſt. Plant. Helv.* p. 248.

RADIX *perennis.*

CAULIS fruticoſus, ſcandens, fiſtuloſus, ramoſus, tuberculis parvis ſubaſper, leniter anguloſus, orgyalis et ultra.

RAMI alterni, juniores purpurei.

FOLIA petiolata, mollia, venoſa, in caulem ſubdecurrentia, *inferiora* ovato-lanceolata, integerrima ; *ſuperiora* trilobo-haſtata.

FLORE Sin CYMAS racemoſas diſpoſiti; pedunculi florales ad baſin bulboſi, aut ex acetabulo quaſi prodeuntes.

CALYX. PERIANTHIUM monophyllum, parvum, quinquefidum, purpureum, ſegmentis obtuſiuſculis, perſiſtens ; *fig.* 1.

COROLLA monopetala, rotata ; TUBUS breviſſimus ; LIMBUS quinquepartitus, LACINIIS lanceolatis, purpureis, reflexis ; FAUX nigra, nitida, ad baſin ſingulæ laciniæ maculæ duæ, virides, *fig.* 3—2.

STAMINA. FILAMENTA quinque, breviſſima, tubo corollæ inſerta, nigro-purpurea. ANTHERÆ quinque, flavæ, erectæ, in tubum ſubconicum coalitæ, apicibus biforaminoſis, *fig.* 4—5.

PISTILLUM. GERMEN pyriforme ; STYLUS ſubulatus, ſtaminibus paulo longior ; STIGMA ſimplex, obtuſum, *fig.* 6.

PERICARPIUM. BACCA ovata, coccinea, glabra, bilocularis, receptaculo utrinque convexo, cui ſemina adnectuntur, *fig.* 8.

SEMINA plures, luteſcentia, compreſſa, ſubreniformia, pulpo odoris ingrati obtecta, *fig.* 9.

ROOT *perennial.*

STALK woody, climbing, hollow, branched, thinly beſet with ſmall pointed tubercles, ſlightly angular, and growing to the height of ſix feet, or more.

BRANCHES alternate, the younger ones purple,

LEAVES ſtanding on foot-ſtalks, of an oval pointed ſhape, ſoft, veiny, running ſlightly down the ſtalk, the *lower ones* entire, the *upper ones* halbert ſhaped.

FLOWERS growing in branched CYMÆ, the proper peduncles of the flowers bulbous at their baſe, or growing out of a kind of ſocket.

CALYX a PERIANTHIUM of one leaf, ſmall, and purple, divided into five ſegments, the ſegments bluntiſh, perſiſting ; *fig.* 1.

COROLLA monopetalous, wheel-ſhaped, the TUBE very ſhort, the limb divided into five ſegments, the SEGMENTS lancet-ſhaped, purple, and turning back ; the MOUTH black and ſhining, at the bottom of each ſegment are two roundiſh green ſpots, *fig.* 3. 2.

STAMINA. five FILAMENTS very ſhort, of a black purple colour, and inſerted into the tube of the Corolla. Five ANTHERÆ yellow, upright, and uniting into a tube, with two holes at the top of each, out of which the POLLEN is diſcharged, *fig.* 4. 5.

PISTILLUM. the GERMEN pear-ſhaped ; the STYLE tapering, a little longer than the Stamina ; the STIGMA ſimple and obtuſe ; *fig.* 6.

PERICARPIUM. an oval, ſcarlet, ſmooth BERRY of two cavities, the receptacle to which the ſeeds are connected, is round, on both ſides ; *fig.* 8.

SEEDS ſeveral, flat, ſomewhat kidney-ſhaped ; *fig.* 9. of a yellowiſh colour, incloſed in the pulp, which has a diſagreeable ſmell.

THE Woody Nightſhade has been commended as a medicine for many diſtempers by the old Botaniſts, in their uſually laviſh manner ; but PARKINSON ſays, he found the juice of it prove a very churliſh purge. LINNÆUS prefers an infuſion of the ſtalk of this plant to any of the foreign woods, as a cleanſer of the blood, and recommends it in inflammatory fevers, obſtructions, the itch, and rheumatiſm ; and to render the knowledge of plants as extenſively uſeful as poſſible, he does not think it beneath him to remark, that the *Swediſh* Peaſants make hoops of the ſtalk of this plant to bind their wooden cans. RAY informs us, that the inhabitants of *Weſtphalia*, who are ſubject to the ſcurvy, make uſe of a decoction of the whole plant as their common drink with ſucceſs againſt that diſtemper.

FLOYER ſays, that thirty berries of this plant killed a dog in leſs than three hours, and remained undigeſted in his ſtomach ; as theſe berries from their reſemblance, may happen by miſtake to be eaten for currants by children, it may not be improper to remark, that in ſuch a caſe, it is adviſeable to pour down inſtantly as much warm water as poſſible, to dilute the poiſonous juice, and provoke vomiting, till farther aſſiſtance can be had.

Goats and ſheep are ſaid to feed on this plant, but our other cattle, *viz.* kine, horſes, and ſwine, refuſe it.

It grows plentifully in moiſt hedges, and blows from *July* to *Auguſt*. The berries are ripe in *September* and *October*. It is ſometimes found with a white flower.

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Kilburn punct et sculpt

Lonicera Periclymenum.

LONICERA *PERICLYMENUM.* HONEY SUCKLE

or WOODBINE.

LONICERA *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.

Raii Synopsis. ARBORES ET FRUTICES FRUCTU FLORI PFTALOIDI CONTIGUO.

LONICERA capitulis ovatis imbricatis terminalibus, foliis omnibus distinctis. *Lin. Sp. Pl.* 247.

PERICLYMENUS *Fuschii Icon* 646.

PERICLYMENUM non perfoliatum Germanicum. *Bauhin pin.* 302.

CAPRIFOLIUM Germanicum *Dodon. Gerard. emac.* 891. *Parkinson.* 1460. *Raii Synop.* 458. *Hudson Fl.* 80. *Haller. hist.* 301. *Scopoli Fl. Carniol. p.* 153.

CAULIS lignosus, volubilis, orgyalis et ultra; cortice pallide fusco; RAMI oppositi, purpurei.

FOLIA opposita, ovata, glabra, subtus cærulescentia.

FLORES terminales, verticillatim dispositi, patentes, rubri, interne flavi, odoratissimi.

CALYX PERIANTHIUM superum, brevissimum, quinquepartitum; segmentis ovato-lanceolatis, erectis, duobus inferioribus remotioribus. *fig.* 1.

BRACTEÆ subcordatæ, *fig.* 8, germina imbricatim cingentes, ad marginem præcipue scabræ, ut sunt calyx, et tubi basis pilis glanduliferis.

COROLLA monopetala, tubulosa, TUBUS oblongus, subinfundibuliformis, LIMBUS bipartitus, laciniis revolutis, superiore quadrifida, segmentis fere æqualibus, obtusis, inferiore integra. *fig.* 2.

STAMINA: FILAMENTA quinque filiformia, corolla longiora, alba, tubo corollæ inserta; *fig.* 3. ANTHERÆ dum pollinem involvunt oblongæ, incumbentes, postea lunatæ. *fig.* 4.

PISTILLUM: GERMEN subrotundum, inferum, *fig.* 5. STYLUS filiformis, Staminibus paulo longior, *fig.* 6. STIGMA capitatum, subrotundum, trifidum, viride. *fig.* 7.

PERICARPIA: BACCÆ plures, subrotundæ, rubræ, umbilicatæ, biloculares, omnes distinctæ. *fig.* 9.

SEMINA Plura, lutescentia, hinc convexa inde plana. *fig.* 10.

STALK woody, twining, growing to the height of six feet or more, the Bark a pale brown, the BRANCHES opposite and purple.

LEAVES opposite, oval, smooth, underneath of a blueish colour.

FLOWERS terminal, growing in a whirl, and spreading; externally red, internally yellow, and fragrant.

CALYX a *Perianthium* placed above the Germen, very short, divided into five segments, which are of an oval pointed shape, and upright, the two inferior ones most remote from each other. *fig.* 1.

FLORAL LEAVES laying one over the other, and closely embracing the Germina, reddish at the edges and cover'd as well as the Calyx and base of the tube with glandular hairs. *fig.* 8.

COROLLA monopetalous, and tubular, the TUBE long, and somewhat funnel shaped, the LIMB bipartite, the laciniæ rolling back, the upper one divided into four blunt and nearly equal segments, the lower one entire. *fig.* 2.

STAMINA: five white FILAMENTS, of an equal thickness throughout, longer than the Corolla and inserted into its tube, *fig.* 3. the ANTHERÆ while they contain the Pollen oblong, afterwards semilunar and of a yellow colour. *fig.* 4.

PISTILLUM: the GERMEN roundish and placed below the Calyx, *fig.* 5. the STYLE filiform, a little longer than the Stamina, *fig.* 6. the STIGMA roundish, trifid, and of a green colour. *fig.* 7.

SEED VESSELS several roundish red BERRIES, having the remains of the Calyx adhering to them, and all distinct. *fig.* 9.

SEEDS several, of a yellowish brown colour, round on one side and flattish on the other. *fig.* 10.

The early writers attributed virtues to this officinal plant which the latter have been inclined to give up, as a medicine we must not expect much from it, but the beauty, singularity, and exquisite fragrance of its flowers have long given it a place in our Gardens. It is a Climber and turns from East to West with most of our other English Climbers, and in common with them it bears clipping and pruning well; for in a state of nature those plants that cannot ascend without twining round others are often liable to lose large branches, they have therefore a proportional vigour of growth to restore accidental damages. This plant is subject when placed near Buildings to be disfigured and injured by small insects called Aphides or vulgarly blights, these Animalculæ were formerly supposed to be brought by the East Wind, and consequently the mischief was looked upon as inevitable, but observation has of late years corected that Error, their history is well known*, but no effectual remedy against them is as yet discover'd. These Insects are not very numerous in Spring, but as the Summer advances they encrease in a surprising degree; to preserve the plant therefore from injury it is necessary to watch their first attacks, cut off and destroy the branches they first appear on, for when they have once gained ground they are defended by their numbers. We have seen small plants cleared of them by sprinkling spanish snuff on the infected branches, but for large trees this remedy is scarcely practicable. The leaves are likewise liable to be curled up by a small caterpillar (Phalæna Tortrix *Linnæi*) which produces a beautifull little Moth, see Albins history of english Insects pl. 73. It is fed on by Kine, Goats, and Sheep, but Horses refuse it.

To shew the confusion of antient names it may not be improper to mention that this plant and Woodroffe (Asperula odorata) have been both called Matrisylva by the old botanic writers. Our Poets also have strangely confounded the names of this plant, SHAKESPEAR says

So doth the WOODBINE *the sweet* HONEYSUCKLE
Gently entwist

MILTON seems to call this plant *Eglantine* although that is an undoubted name for the *Sweet Briar*

Through the SWEET BRIAR *or the Vine*
Or the TWISTED ECLANTINE.

We find it plentifully in Woods and Hedges flowering from July to September, such plants as grow in shady places produce blossoms of a paler colour, and they universally smell sweetest in the Evening; at which time some particular Species of Sphinges (*Linnæi*) or Hawk Moths are frequently observed in Gardens hovering over the blossoms and with their long tongues which are peculiarly adapted to the purpose, extracting honey from the very bottom of the flowers.

* Vid Reaumur and Geoffroy.

16

Hedera Helix.

HEDERA HELIX. IVY.

HEDERA *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA. *Petala* quinque oblonga. *Bacca* quinqueſperma calyce cincta.

Raii Syn. ARBORES ET FRUTICES FRUCTU FLORI PETALOIDI CONTIGUO.

HEDERA *Helix* foliis ovatis lobatiſque. *Linn. Syſt. Vegetab. p.* 202. *Sp. Pl.* 292. *Fl. Suecic. p.* 75.
HEDERA foliis ſterilibus trilobatis, fructiferis ovato-lanceolatis. *Haller hiſt. helv. n.* 826.
HEDERA *Helix. Scopoli Fl. Carniol. n.* 271. *Hudſon Fl. Angl p.* 85.
HEDERA arborea. *Bauhin. Pin.* 305.
HEDERA poetica. *Bauhin. Pin.* 305.
HEDERA major ſterilis. *Bauhin. Pin.* 305.
HEDERA humi repens. *Bauhin. Pin.* 305.
HEDERA arborea ſive ſcandens et corymboſa communis. *Parkinſon* 678.
HEDERA *Helix Ger. Em.* 858. *Raii Syn.* 459. Climbing or Berried Ivy: alſo Barren or Creeping Ivy.

TRUNCUS in arboribus hujus ſpeciei ſeneſcentibus cortice rimoſo cinereo veſtitur, in novellis ramis viridis aut purpureus cernitur, fibrillas e latere interiori exerit, quorum ope proximis arboribus aut parietibus innixus alta petit.

TRUNK; the trunk in trees of this ſpecies, which are old, is covered with an aſh-coloured chopped bark, in the young branches it is of a green or purple colour; from the inſide of the trunk a great number of ſmall fibres are thrown out, by the aſſiſtance of which, it ſupports itſelf on the neareſt walls and trees, and climbs aloft.

FOLIA quam maxime varia, dum planta repit plerumque trilobata, quinquelobata etiam occurunt; adminiculis derelictis, ovata fiunt; glabra, nitentia, nunc rubedine ornata, nunc venis albis picta, preſertim in ramulis junioribus.

LEAVES as various as poſſible, while the plant creeps they are in general trilobate, ſometimes quinquelobate, leaving its ſupporters, they become oval; ſmooth, ſhining, ſometimes tictured with red, ſometimes painted with white veins, particularly in the young branches.

FLORES luteſcentes, in ſummitatibus caulium umbellatim diſpoſiti, UMBELLÆ denſæ, globoſæ.

FLOWERS yellowiſh, growing on the top of the ſtalks in thick round UMBELS,

COROLLA: quinque, ovata, flaveſcentia, patentia.

COROLLA: PETALS five, oval, yellowiſh and ſpreading.

STAMINA: FILAMENTA quinque longitudine Corollæ; ANTHERÆ baſi bifidæ, incumbentes, *fig.* 1.

STAMINA: five FILAMENTS the length of the Corolla; ANTHERÆ bifid at bottom, and incumbent, *fig.* 1.

PISTILLUM: GERMEN turbinatum; STYLUS ſimplex, breviſſimus; STIGMA ſimplex, *fig.* 2.

PISTILLUM: GERMEN roundiſh; STYLE ſimple and very ſhort; STIGMA ſimple, *fig.* 2.

PERICARPIUM: BACCA globoſa, nigra, intus purpurea, quadrilocularis aut quinquelocularis, coronata receptaculo et ſtylo conico brevi, loculis monoſpermis, *fig.* 3, 4.

SEED-VESSEL: a round BERRY, externally black, internally purple, with four or five cavities each containing one ſeed, crowned with the receptacle and ſhort conic Style, *fig.* 3, 4.

SEMINA quinque, hinc gibba, inde angulata, *fig.* 6.

SEEDS five, on one ſide gibbous, on the other angular, *fig.* 6.

The Hedera Helix begins to blow in ſunny aſpects towards the end of September, and according to ſituation bloſſoms on through October, and November. This plant is one of the laſt blowers, and is much reſorted to by bees, and flies of various ſpecies, which ſwarm on its branches, and feed on its bloſſoms, making ſuch a humming on ſunny days as may be diſtinguiſhed at a conſiderable diſtance.

The berries encreaſe in bulk gradually all through the winter months, and are full formed by February; in April they ripen and turn very black, and are eaten by ſeveral ſpecies of thruſhes, and wild pigeons. Thus does fructification manifeſtly obtain in this inſtance all through the winter months, as well as in the moſſes and lichens.

Sheep are very fond of Ivy, which in hard weather is a warm and wholſome food; and therefore ſhepherds in ſnowy ſeaſons cut down branches for their flocks to brouze on. CATO directs that in a ſcarcity of hay, cattle ſhould be foddered with Ivy.

Profeſſor KALM, in his travels through the greateſt part of N. America, ſaw but one plant of Ivy, and that was running up the walls of a man's houſe: this ſpecimen was probably carried thither by ſome European who perhaps was deſirous of propagating in that new world a plant that might ſtill recall to his mind the pleaſing Idea of his native cottage, tufted with the foliage of this beautiful Evergreen.

The antients held this plant in great eſteem; their Heroes and Poets are deſcribed as wearing garlands compoſed of it. The ſuppoſition of its preventing intoxication is of very early date: Homer therefore mentions his Bacchus as Ivy-crowned and often deſcribes his Heroes drinking out of a Cup made of the wood of Ivy. (κισσυβιον.) CATO tells us that with a cup of this kind we may diſtinguiſh wine that has been adulterated with water, for the wine will be diſcharged and the water remain: to ſuch an extravagant aſſertion has this grave author been probably led by relying on the ſuppoſed antipathy between the wine and ivy: This cup is ſtill uſed in ſome parts of the kingdom as a remedy for a trembling hand; but rational practice has not admitted any part of the Hedera into the Materia Medica, Ivy-leaves however are ſaid to be ſucceſfully applied to painful Corns. When it trails on the ground it branches are ſmall and weak; and its leaves are divided into three lobes; but when it climbs walls or trees it grows much ſtronger and the leaf changes to an oval form: theſe different appearances induced old Botaniſts to ſuppoſe there were two or three different ſpecies. In its variegated ſtate it ſometimes appears almoſt white, and may perhaps be the *Hedera alba*, and *pallentes Hederæ of* VIRGIL.

Few people are acquainted with the beauty of Ivy when ſuffered to run up a ſtake, and at length to form itſelf into a ſtandard, the ſingular complication of its branches and the vivid hue of its leaves give it one of the firſt places amongſt evergreens in a ſhrubbery; In woods when ſuffered to grow large and rampant, this plant by twining round their bodies does great damage to timber trees; and therefore ſhould be carefully deſtroyed: but in ornamented Out-lets, where evergreens do not abound, a few trees covered with Ivy have a very pleaſing effect, and moreover induce birds of ſong to haunt thoſe thickets for the ſake of the berries and ſhelter.

In the Stump of Ivy many birds build their Neſts particularly the Black-bird.

When Ivy is prejudicial, it may eaſily be deſtroyed, tho' it has ſpread to a great height, by cutting through its Trunk, and this ſhows that the fibres which the Stalk throws out in ſo ſingular a manner ſerve more to ſupport than nouriſh it.

The ſoft wood of Ivy is made uſe of by Shoemakers to give a ſmooth edge to their cutting knives.

1 2 3 4 5

Conium maculatum.

Killburn

CONIUM MACULATUM. HEMLOCK.

CONIUM *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Raii. Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

CONIUM *maculatum* ſeminibus ſtriatis. *Linn. Syſt. Vegetab. p.* 229.

CICUTA *Haller. hiſt. helv. n.* 766. *v.* 1. *p.* 337.

CONIUM *maculatum. Scopoli Fl. Carniol. p.* 207.

CICUTA major *Bauhin. Pin.* 160.

CICUTA *Gerard emac.* 1061.

CICUTA vulgaris major *Parkinſon* 933. *Raii Syn. p.* 215. *Hudſon Fl. Angl. p.* 100. *Störck. Cicut. Suppl. p.* 7. *t.* 1.

RADIX biennis, craſſitudine digiti, longa uſque ad pedalem, in crura ſæpe diviſa, juniori Paſtinacæ haud diſſimilis, odoris gravis, et ſaporis ſubdulcis: ſecundo anno in cauleſcente planta ſucco fere caret, firma ſolidiorque evadit.

ROOT biennial, the thickneſs of ones finger, from ſix inches to a foot in length, frequently forked, and not unlike that of a young Parſnep, of a diſagreeable ſmell and ſweetiſh taſte: in the ſecond year of its growth when the plant has a flowering ſtem, it becomes drier, more firm and ſolid.

CAULIS orgyalis, teres, nitidus, lævis, fiſtuloſus, ad baſin craſſitie pollicis, rore glauco tectus, et maculis ſanguineis pictus, verſus ſummitatem ramoſus, et ſtriatus.

STALK about ſix inches high, round, ſhining, ſmooth and hollow, at bottom the thickneſs of ones thumb, covered with a blueiſh kind of powder which eaſily wipes off, and ſpotted with red, towards the top branched and ſtriated.

FOLIA inferiora magna, etiam bipedalia, atro-virentia, nitentia, multiplicato-pinnata, pinnulis oblongis inciſo-ſerratis; SPATHA ſulcata.

LEAVES. The bottom leaves large, even two feet long, of a dark green colour and ſhining, many times pinnated, the pinnulæ oblong and ſharply cut in; the SPATHA grooved.

INFLORESCENTIA. *Umbella univerſalis* Radiis plurimis patentibus ſtriatis; *partialis* conſimilis.

INFLORESCENCE. The *Univerſal Umbell* is compoſed of many ſtriated and ſpreading Radii; the *Partial Umbell* ſimilar to it.

CALYX: *Involucrum univerſale* e foliolis 5--7 conſtat, lanceolato-acuminatis, reflexis, margine albidis, *fig.* 1; *partiale* 3 aut 4 dimidiatis, extrorſum patentibus, *fig.* 2.

CALYX: the *Univerſal Involucrum* conſiſts of 5 or 7 leaves, which are lanceolate, turned back, and whitiſh at the edges, *fig.* 1: the *Partial Involucrum* is compoſed of 3 or 4 leaves, which ſurround one half of the ſtalk only, and ſpread outward, *fig.* 2.

COROLLA: PETALA quinque, alba, inæqualia, inflexo-cordata, *fig.* 3.

COROLLA: PETALS five, white, unequal, heart-ſhaped, and bent in at top, *fig.* 3

STAMINA: FILAMENTA quinque, alba, longitudine Corollæ; ANTHERÆ albæ, *fig.* 3.

STAMINA: FILAMENTS five, white, the length of the Corolla; ANTHERÆ white, *fig.* 3.

PISTILLUM: STYLI duo, albi, filiformes, non admodum breves; STIGMATA ſubrotunda; GERMEN inferum, ſtriatum, *fig.* 3, 4.

PISTILLUM: GERMEN beneath the Corolla, ſtriated, *fig.* 3, 4; STYLES two, filiform and not very ſhort; STIGMATA round, *fig.* 3.

FRUCTUS ſubrotundus, e binis ſeminibus fuſceſcentibus componitur, hinc planiuſculis, illinc gibbis, cum *ſtriis quinque elevatis crenulatis*, *fig.* 4, 5.

FRUIT is roundiſh, and compoſed of two browniſh ſeeds, flattiſh on one ſide and round on the other, with *five notched and elevated ridges*, *fig.* 4, 5.

THE powerfull deleterious properties of this herb have been long known and acknowledged by all botanic writers; whence it has been commonly ranged in the claſs of Vegetable Poiſons. And as ſuch active principles under ſkilful management, are likely to afford the moſt efficacious remedies, this plant has been alſo admitted as an article of the Materia Medica. Until lately however, the uſe of it was chiefly confined to external applications, where its narcotic qualities may undoubtedly aſſiſt in aſſwaging pain, forwarding ſuppuration, &c. But in the year 1760, Dr. STÖRCK, a famous Practitioner at Vienna, publiſhed a treatiſe on Hemlock, recommending an extract made of the inſpiſſated juice of the herb to be taken internally, from four grains to ſixty, or upwards, every day, as a cure for the *Schrophula*, *Cancer*, and others of the moſt terrible and inveterate diſorders incident to the human body.

Our Phyſicians though laudably cautious of admitting or truſting to novelties, received Dr. STÖRCK's publication with uncommon ardour, and perhaps no new medicine was ever more immediately or generally tried than this *Extractum Cicutæ*. The ſucceſs however not anſwering their expectation, led ſome to think they had miſtaken the plant. The Author was applied to, and this produced a ſupplement (printed 1764) wherein the ſpecies is figured, and clearly ſhewn to be the *Conium maculatum* of LINNÆUS. It were to be wiſhed this had cleared up all difficulties. In his firſt treatiſe the Doctor tells us that the freſh root ſliced, yielded a bitter acrid milk, of which a ſingle drop or two being applied to the tip of his tongue, preſently rendered it painful, rigid, and ſo much ſwelled that he could not ſpeak, Yet it is certain that the roots of our *Hemlock* may be chewed and ſwallowed in conſiderable quantities without producing any ſenſible effect. Mr. ALCHORNE, (who I believe was the firſt that laudably exerted himſelf in inveſtigating this matter,) aſſures me that he has tried this in every ſeaſon of the Year, and in moſt parts of our Iſland, without finding any material difference: and that he

he has alſo been well informed both from *Berlin* and *Vienna*, that the *Hemlock* Roots in thoſe countries, are no more virulent than ours about *London*. Mr. TIMOTHY LANE informs me, that he alſo with great caution made ſome experiments of the like kind, and in a ſhort time found he could venture to eat a conſiderable part of a root without any inconvenience; after that, he had ſome large roots boiled, and found them as agreeable eating at dinner with meat, as Carrots, which they in taſte ſomewhat reſembled: and as far as his experience, joined with that of others informed him, the Roots might be cultivated in Gardens, and either eaten raw like Celery, or boiled as Parſneps or Carrots. That in Spring and Winter they are not woody as in Summer: that he has eaten them from different places and in all ſeaſons; and that he perceived ſome roots were more pungent than others, but not in any degree worthy notice.

The experiments of theſe ingenious Gentlemen ſufficiently evince the innocence of the rooots of this plant, contrary to what has been aſſerted by Dr. STÖRCK, and hence we may infer that whatever accounts have been related by Authors of their poiſonous qualities, the Roots of ſome other Plant muſt have been made uſe of. In the poiſonous quality of the *Herb* however all Authors ſeem agreed, but with reſpect to its efficacy as a medicine they very much differ. If we may believe Dr. STÖRCK, there is ſcarce a diſeaſe incident to the human body which it either does not cure, or relieve; but it is remarkable that a copious experience of fifteen years, as well in the great Hoſpitals of this Metropolis as in the private practice of the whole Kingdom, ſhould not have afforded one inſtance of a perfect cure by the Extract, at leaſt none ſuch has appeared among the valuable collections of caſes publiſhed by our College of Phyſicians and other Medical Societies. Both Dr. FOTHERGILL of London, and the late Dr. RUTTY of Ireland, men of the greateſt eminence in their profeſſion, have declared that the ſucceſs attending it has not been equal to what they had reaſon to expect from Dr. STORCK's account of it; (*vid. medical obſervations and enquiries, vol. 3.*) yet tho' it had failed them in the cure of many of thoſe diſeaſes which unfortunately were the *opprobia medicorum*, it had proved beneficial in various obſtinate complaints; Scrophulous tumours were to appearance diſſolved by it; the progreſs both of occult and ulcerated Cancers was retarded, the pain alleviated, and the diſcharge changed for the better in every reſpect; divers putrid and ſordid Ulcers were by the uſe of *Hemlock* remarkably mended in their diſcharge, and diſpoſed to heal, in ſome of which the Sublimate had been given in vain; hence the Extract is ſtill frequently uſed, and will probably continue to be preſcribed, becauſe its effects as an Anodyne will often afford at leaſt a temporary relief, and becauſe in deſperate diſeaſes a doubtful remedy ſeems better than none at all.

The taking of the Extract is generally attended with a giddineſs and often with a pain of the head, nauſea, and other diſagreeable ſymptoms; in ſome however its effects are apparently anodyne, as it eaſes pain and promotes reſt even where Opium has failed.

Phyſicians ſeem ſomewhat divided about the beſt mode of exhibiting this medicine, ſome recommending the extract as being moſt eaſily taken in the form of pills, others the powder, as not being ſubject to that variation which the extract is liable to from being made in different ways. With reſpect to the period likewiſe at which the plant ſhould be gathered, they ſeem not perfectly agreed, ſome recommending it when in its full vigour, and juſt coming into bloom, others when the flowers are going off and the whole plant has acquired a yellowiſh hue. That the Extract might be at all times equally active, and uniformly prepared, Dr. CULLEN has for many years recommended the making it from theunripe ſeeds, and this mode the College of Phyſicians at Edinburgh has thought proper to adopt in their new Pharmacopœia.

Hemlock grows very frequently on banks by the ſides of Roads, by hedge ſides, and in Fields and Gardens, flowering in the month of July.

We have a common Engliſh Proverb that *what is one Mans Meat is another mans Poiſon*, and agreeable to this are the lines of LUCRETIUS which relate to this plant;

"*Pingueſcere ſæpe Cicutâ*
"*Barbigeros pecudes homini quæ eſt acre venenum.*"

That it affords nouriſhment to Birds likewiſe there is ſufficient evidence, our learned Philoſopher and accurate Naturaliſt Mr. RAY, found in the Crop of a Thruſh abundance of *Hemlock* ſeeds, at a time too when other vegetable food might be had in abundance. It appears to be eaten by very few or no Inſects.

The dried ſtems or kexes are uſed by Boys for various purpoſes.

The *Hemlock* is obviouſly diſtinguiſhed from our other umbelliferous plants by its *large* and *ſpotted ſtalk*, by the *dark* and *ſhining green colour of its bottom leaves*, and particularly by their *diſagreeable ſmell* when bruiſed, and which according to Dr. STORCK reſembles that of Mice. The *Fools Parſley* and *Scandix with rough ſeeds* are the moſt likely to be miſtaken for this poiſonous plant, but may eaſily be diſtinguiſhed if attention be paid to the deſcriptions and figures we have already given of them.

Æthusa Cynapium.

ÆTHUSA *CYNAPIUM.* FOOL's PARSLEY.

ÆTHUSA *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.
Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.
ÆTHUSA *(Cynapium)* foliis conformibus. *Linnæi Syſt. Vegetab. p.* 236. *Flor. Suecic. p.* 92.
ÆTHUSA. *Haller. hiſt. n.* 765.
CICUTA minor petroſelino ſimilis. *Bauhin. Pin. p.* 160.
CICUTARIA Apii folio. *I. Bauhin.*
CICUTARIA tenuifolia *Gerard. emac.* 1063.
CICUTA minor ſive fatua *Parkinſon.* 933. *Raii Syn. p.* 215. the leſſer Hemlock or Fool's Parſley. *Scopoli Fl. Carniol. p.* 206. *Hudſon Fl. Angl. p.* 107. *Hill's Britiſh Herbal* ſmall Hemlock *tab.* 58. *icon peſſima.*

RADIX *annua*, fuſiformis, alba, *minimi digiti craſſitudine*, paucis fibris inſtructa.

CAULIS pedalis ad bipedalem, erectus, ramoſus, ſtriatus, fiſtuloſus, glaucus, verſus baſin ſæpe purpureus, *non vero maculatus.*

FOLIA radicalia et ramea conformia, lævia, ſuperne *atro-virentia*, inferne pallidiora, nitentia, duplicato-pinnata, pinnis pinnatifidis, profunde inciſis, pinnulis ovato-acutis, mucronatis. *Vaginæ* ad baſin petiolorum parvæ, læves, marginibus membranaceis.

PETIOLI erecti, ſulcati.
UMBELLA *univerſalis* patens, radiis interioribus per gradus brevioribus, intimis breviſſimis; *partialis* univerſali ſimilis.
INVOLUCRUM *univerſale* nullum, *partiale* dimidiatum, extus poſitum, *foliolis tribus longiſſimis linearibus pendulis*, *fig.* 1.

COROLLA: PETALA quinque, alba, obcordata, inæqualia, apice inflexa, exteriora majora, *fig.* 2.
STAMINA: FILAMENTA quinque, alba, longitudine corollæ, inflexa: ANTHERÆ albæ, nonnunquam rubellæ, *fig.* 3.
PISTILLUM: GERMEN inferum, glandulâ vireſcente coronatum: STYLI duo, primum erecti, dein deflexi: STIGMATA obtuſa, *fig.* 4.

PERICARPIUM nullum: FRUCTUS ovato-ſubrotundus, ſtriatus, bipartibilis, *fig.* 5.

SEMINA duo, pallide fuſca, hinc convexa, profunde ſtriata, hinc plana, figurâ ovato-acutâ notata, *fig.* 6.

ROOT *annual*, tapering, of a white colour, *about the thickneſs of the little finger*, furniſhed with few fibres.
STALK from one to two feet high, upright, branched, ſtriated or ſlightly grooved, hollow, covered with a blueiſh kind of powder which eaſily wipes off, towards the bottom frequently of a purple colour, *but not ſpotted.*
LEAVES: the bottom leaves and thoſe of the branches ſimilar, ſmooth, on the upper ſide of a *dark green colour*, underneath paler and ſhining, twice pinnated, the leaves pinnatifid and deeply cut in, the ſmall leaves or pinnulæ oval and terminating in a fine point. The SHEATHS at the baſe of the foot-ſtalks ſmall, ſmooth and membranous at the edges.
FOOT-STALKS of the flowers, upright and grooved.
UMBEL: the *univerſal umbel* ſpreading, the inner radii gradually ſhorter, the inmoſt very ſhort; the partial umbel like the univerſal.
INVOLUCRUM: the *univerſal* INVOLUCRUM wanting, the *partial* one placed externally, and only ſurrounding one half of the umbel, compoſed of *three very long, linear, and pendulous leaves*, *fig.* 1.
COROLLA: five unequal, heart-ſhaped, white PETALS, bent in at top, the outer ones largeſt, *fig.* 2.
STAMINA: five white FILAMENTS the length of the Corolla, bending in: ANTHERÆ white, ſometimes reddiſh, *fig.* 3.
PISTILLUM: GERMEN placed below the corolla, and crowned by a glandular ſubſtance of a greeniſh colour: two STYLES firſt upright, afterwards bending downward: STIGMATA blunt, *fig.* 4.
SEED-VESSEL wanting: the FRUIT or unripe ſeed of an oval roundiſh ſhape, ſtriated, and dividing into two parts, *fig.* 5.
SEEDS two, of a pale brown colour, convex and deeply ſtriated on one ſide, flat on the other, and marked with a figure of an oval pointed ſhape, *fig.* 6.

ONE of the principal advantages reſulting to mankind from Botany, is the rightly aſcertaining thoſe plants which are uſed for food, from thoſe which are known to be poiſonous. It not unfrequently happens that both theſe kinds of Herbs grow in the ſame ſoil, nay often in the ſame bed together, and ſo ſimilar are they in their general appearance, that the indiſcriminating eye of the common obſerver readily miſtakes the one for the other, and hence diſeaſes fatal in their conſequences ſometimes enſue. To point out then the moſt obvious diſtinctions between ſuch kinds of plants, is not only our buſineſs but our duty.

The *Fool's Parſley* ſeems generally allowed to be a plant which poſſeſſes poiſonous qualities.

Baron HALLER has taken a great deal of pains to collect what has been ſaid concerning it, and quotes many authorities to ſhew that this plant (on being eaten) has been productive of the moſt violent ſymptoms, ſuch as anxiety, hickcough, and a delirium even for the ſpace of three months, ſtupor, vomiting, convulſions and death: He ſuſpects however that the common Hemlock may ſometimes have had a ſhare in producing theſe ſymptoms, as he finds in authors that the Fool's Parſley had been uſed by a whole family without any bad effect, although he imagines this might be owing to the ſmallneſs of the quantity eaten. As a corroborating proof of its deleterious quality, LINNÆUS aſſerts that itproves fatal to geeſe if they happen to eat it.

Altho' it ſeems rather doubtful whether it be ſo poiſonous to mankind as is repreſented, yet it will perhaps be moſt prudent to conſider it as ſuch, until future experiments ſhall determine its effects with more certainty.

The plants to which this bears the greateſt reſemblance, are *common Garden Parſley* and *common Hemlock*, *Conium maculatum*; this ſimilarity has been obſerved by moſt Botanic Writers, ſome of whom have called it a kind of Hemlock, others a kind of Parſley; it differs however conſiderably from both theſe Genera. The colour of its leaves alone, is nearly ſufficient to diſtinguiſh it from Parſley; thoſe of common Parſley are of a *yellowiſh green colour*, thoſe of Fool's Parſley of a *very dark green*, and much more finely divided; the leaves of Parſley when bruiſed have *a ſtrong but not diſagreeable ſmell*, thoſe of Fool's Parſley have *very little ſmell* in them. Theſe marks if attended to are ſufficient to diſtinguiſh the *leaves* of theſe two plants, and in the ſtate of leaves they are moſt liable to be taken for one another, as they grow together in Gardens. Where much Parſley is uſed, the Miſtreſs of the houſe therefore would do well to examine the Herbs previous to their being made uſe of; but the beſt precaution will be always to ſow that variety called curled Parſley, which cannot be miſtaken for this or any other plant.

It is diſtinguiſhed from *Hemlock* by being in every reſpect ſmaller, and not having that ſtrong diſagreeable ſmell which characterizes the leaves of that plant; the ſtalk likewiſe is not ſpotted as in the Hemlock; and laſtly it is diſtinguiſhed from *all our umbelliferous* plants by the *three long*, *narrow*, *pendulous leaves* which compoſe its partial *Involucrum*, and which are placed at the bottom of each of the ſmall Umbels.

It grows very common in Gardens, and all kinds of cultivated ground, and *flowers* in July and Auguſt.

ÆTHUSA CYNAPIUM. Fool's Parsley.

Scandix Anthriscus

Kilburn pinxit et sculpt.

SCANDIX ANTHRISCUS. SCANDIX WITH ROUGH SEEDS.

SCANDIX *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA

Raii Syn. Gen. II. UMBELLIFERÆ HERBÆ

SCANDIX *Anthriſcus* ſeminibus ovatis hiſpidis, corollis uniformibus, caule lævi. *Linnæi Syſt. Vegetab. p.* 237. *Flor. Suecic. p.* 93.

CAUCALIS vaginis lanuginoſis, foliis triplicato-pinnatis, ſeminibus roſtratis. *Haller hiſt. n.* 743.

MYRRHIS ſylveſtris, ſeminibus aſperis. *Bauhin pin.* 160. *Parkinſon* 935. *Ger. emac.* 1038. *Raii Syn. p.* 220. Small Hemlock-Chervil with rough Seeds. *Hudſon Fl. Angl. p.* 108. *Jacquin Flor. Auſtriac Vol.* 2. *p.* 35. *tab.* 154.

RADIX annua, parva, albida, ſubinſipida.

CAULIS pedalis ad tripedalem, ſæpe altior, ſuberectus, teres, fiſtuloſus, lævis, ad genicula tumidus et ſubſtriatus, plerumque viridis.

FOLIA. Vaginæ ad baſin foliorum magnæ, marginibus lanuginoſis ; Folia mollia, tenera, multiplicate pinnata, hirſutula, ex luteo-virentia.

INFLORESCENTIA *Umbella.* UMBELLÆ obliquæ, pedunculatæ: Pedunculus univerſalis RADIIS brevior, RADII *univerſales* 3—5. glabri, *partiales* 2—6.

CALYX: *Involucrum univerſale* nullum. *Partiale* plerumque pentaphyllum, foliolis lanceolato-acuminatis, ciliatis, perſiſtentibus *fig.* 1:

COROLLA: PETALA quinque, minima, ſubæqualia, alba, ſubcordata, apicibus inflexis. *fig.* 2:

STAMINA: FILAMENTA quinque, petalis paulo breviora; ANTHERÆ primum virides, dein fuſcæ *fig* 3.

PISTILLUM: GERMEN oblongum, inferum, ſubcompreſſum, hirſutum, STYLI duo breves. *fig.* 5.

SEMINA duo, oblonga, e fuſco-nigricantia, hinc ſulcato-plana, inde convexa, roſtrata, pilis rigidis hamatis undique aspera *fig.* 6.

ROOT annual, ſmall, whitiſh, with little taſte.

STALK from one to three feet high, frequently taller, nearly upright, round, hollow, ſmooth, ſwelled and ſlightly ſtriated at the joints, and moſt commonly green.

LEAVES. The ſheaths formed by the baſe of the leaves are large and downy at the edges: the leaves ſoft, tender, many times pinnated, ſlightly hairy, and of a yellowiſh green colour.

INFLORESCENCE an *Umbell*, the UMBELLS oblique, ſtanding on footſtalks, the general or univerſal footſtalk ſhorter thân the RADII; the *univerſal* RADII from 3 to 5, the *partial* RADII from 2 to 6.

CALYX. *The univerſal Involucrum* wanting, the *Partial* one generally compoſed of five leaves, which are pointed, hairy at the edges, and continue. *fig.* 1.

COROLLA: five PETALS very minute, nearly equal, white, ſomewhat heart ſhaped, the tips bending in, *fig.* 2.

STAMINA: five FILAMENTS, a little ſhorter than the Petals; the ANTHERÆ firſt green, afterwards brown, *fig.* 3.

PISTILLUM: the GERMEN oblong, placed beneath the Corolla, flattiſh, and rough, two STYLES very ſhort *fig.* 5.

SEEDS two, oblong, of a dark brown colour, on one ſide flat and grooved, on the other convex, running out to a point, and prickly with ſtiff hooked hairs, *fig.* 6.

THE great ſimilarity in the external appearance of a great number of umbelliferous plants, frequently hath been the cauſe of miſtakes, which have ſometimes proved hurtful to the health of individuals. At the ſame time that there is no claſs of plants which, at firſt ſight, appears to the young Botaniſt more difficult of inveſtigation than this, there is none perhaps which affords more conſtant, or more certain marks of generic and ſpecific difference. Obvious diſtinctions may be drawn from the *Stalk* and *Leaves*: in ſome the ſtalk is ſmooth in others, rough; and in others, more or leſs deeply channeled; in ſome the leaves are very finely divided; and in others, but coarſely ſo; but the parts of *Fructification* afford the moſt pleaſing, and ſcientific, diſtinguiſhing marks. The abſence, or preſence of the general and partial *Involucrum* the number, ſhape, and ſituation of its leaves, the number of the *Radii* which compoſe the umbell, the ſize and equality of the *Petals*, and the very different appearances of the *Seeds*, all unite to render a knowledge of theſe plants eaſily acquired.

Some of the *Umbelliferi* are uſed in food, and others in medicine; the greateſt care will therefore be neceſſary in the drawing and deſcription of theſe; and in this, no one ſeems to have ſucceeded ſo well as the celebrated JACQUIN. In the firſt and ſecond volumes of his *Flora Auſtriaca*, lately publiſhed, and which indeed are a moſt valuable addition to the ſtock of botanic knowledge, a great number of theſe plants are figured and deſcribed.

This plant grows very common on dry banks and in hedges, flowers from the beginning to the end of May, and the ſeeds are ripe in June. When it becomes luxuriant, as it ſometimes will from growing in a moiſt ſituation, it puts on ſomewhat the appearance of the common Hemlock, but may eaſily be diſtinguiſhed from that poiſonous plant, if attention be paid to the following particulars: The leaves of the Hemlock are perfectly ſmooth; theſe have a ſlight hairineſs, are more finely divided, and of a paler green; the ſtalk of the Hemlock is ſpotted; this is not; the Hemlock has a general involucrum, which in this plant is wanting; the ſeeds of the Hemlock are ſmooth, and theſe are rough; the Hemlock has a ſtrong diſagreeable ſmell; this not diſagreeable, but more like Chervil, to which in its virtues it ſhould ſeem neareſt allied.

Alsine media

ALSINE MEDIA. COMMON CHICKWEED.

ALSINE *Linnæi Gen. Pl.* PENTANDRIA TRIGYNIA.
Cal. 5-phyllus. *Petala* 5-æqualia. *Caps.* 1-locularis, 3-valvis.
Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.
ALSINE *media. Linnæi Syſt. Vegetab. p.* 246. *Flora Suecic. p.* 37.
ALSINE foliis petiolatis, ovato lanceolatis, petalis bipartitis. *Haller hiſt. helv. n.* 880.
ALSINE *media. Scopoli Fl. Carniol. n.* 376.
ALSINE *media. Bauhin pin. p.* 250.
ALSINE *media* ſeu minor. *Gerard emac.* 611. *Raii Syn. p.* 347, Common Chickweed. *Hudſon Fl. Angl. p.* 113. *Oeder Fl. Dan.* 525, 438.

RADIX annua, fibroſa, capillacea.
CAULES plures, tenelli, teretes, ſubrepentes, ramoſi, viticulis geniculati, *unifariam hirſuti*, apicibus ſenſim incraſſatis.
FOLIA ovato-acuta, glabra, leviter ciliata; inferiora petiolata, ſuperiora ſeſſilia, connata.

PETIOLI ad baſin latiora, hirſuti.

PEDUNCULI uniflori, axillares, hirſuti, peractâ floreſcentiâ penduli, demum erecti.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, concavis, ſubcarinatis, marginatis, hirſutis, *Petalis longioribus*, *fig.* 1.

COROLLA: PETALA quinque, alba, nitida, ad baſin fere partita, *fig.* 3, 4, 5.
STAMINA: FILAMENTA quinque, alba, inter Petala locata, Glandulâ ad baſin inſtructa; ANTHERÆ ſubrotundæ, purpuraſcentes, *fig.* 5, 6.

PISTILLUM: GERMEN ſubovatum; STYLI tres filiformes; STIGMATA ſimplicia, *fig.* 7.
PERICARPIUM: CAPSULA unilocularis, in valvulas ſex dehiſcentes, *fig.* 8.
SEMINA octo ad quindecem, ſubreniformia, aſpera, e fuſco-aurantiaca, pedicellis receptaculo connexa, *fig.* 9, 10, auct.

ROOT annual, fibrous, capillary.
STALKS numerous, tender, round, ſtriking root here and there, branched, jointed and ſtringy, *hairy on one ſide only*, growing thicker towards the top.
LEAVES of a pointed oval ſhape, ſmooth, ſlightly hairy at the edges, the lowermoſt ſtanding on foot-ſtalks, the uppermoſt ſeſſile, connate.
FOOT-STALKS of the leaves broadeſt at bottom, and hairy.
FOOT-STALKS of the flowers, each ſuſtaining one flower, proceeding from the boſoms of the leaves, hairy, when the flowering is over hanging down, finally becoming upright.
CALYX: a PERIANTHIUM of five leaves, each of which is lanceolate, concave, ſlightly keel-ſhaped at bottom, with a margin at the edge, hairy, *and longer than the Petals*, *fig.* 1.
COROLLA conſiſts of five white ſhining PETALS, divided nearly to the baſe, *fig.* 3, 4, 5.
STAMINA: five white FILAMENTS, placed betwixt the Petals, furniſhed at bottom with a little Gland; ANTHERÆ roundiſh, of a purpliſh colour, *fig.* 5, 6.
PISTILLUM: GERMEN ſomewhat oval; STYLES three, filiform; STIGMATA ſimple, *fig.* 7.
SEED-VESSEL a CAPSULE of one cavity, ſplitting into ſix valves, *fig.* 8.
SEEDS from eight to fifteen, ſomewhat kidney-ſhaped, of a browniſh orange colour, with a rough ſurface, connected to the receptacle by little foot-ſtalks, *fig.* 9, 10, magnified.

CHICKWEED being a plant which will grow in almoſt any ſituation, is conſequently liable to aſſume many different appearances: when it grows in a rich ſoil, and ſhady ſituation, it will frequently become ſo large as to reſemble the *Ceraſtium aquaticum*; while at other times, on a dry barren wall, its leaves and ſtalks will be ſo minute, as to make the young botaniſt take it for ſome ſpecies different from the common Chickweed: happily however it affords marks which if attended to, will readily diſtinguiſh it from the *Ceraſtium*, and every other plant: excluſive of its differing from the *Ceraſtium* in its generic character, its Petals are ſhorter than the leaves of its Calyx; while in the *Ceraſtium* they are longer; hence a conſiderable difference will be obſervable at firſt ſight in the ſize of the flowers of theſe two plants: and from all other plants related to it, it may be diſtinguiſhed by the ſingular appearance of its ſtalk, which is *alternately hairy on one ſide only*.

The moſt common number of its *Stamina* with us is five; yet I have often ſeen it with leſs, and ſometimes with more; and this inconſtancy in the number of its Stamina has been noticed by moſt botanic writers: GOUAN, in his *Flor. Monſpel.* mentions from 3 to 10, with as many Piſtilla; this circumſtance with reſpect to the number of its Stamina, unfortunately ſeparates it from other plants with which it appears to have by nature a very near relation: but as five Stamina appear to be its moſt conſtant number, LINNÆUS could not have placed it amongſt thoſe plants with ten Stamina, without doing violence to his ſyſtem.

Of annual plants there are few more troubleſome: it ſows itſelf plentifully in the ſummer, and remains green throughout the winter, flowering during the whole time, if the weather be mild: but its chief ſeaſon for flowering is in the ſpring. In rich garden mould, where the ground is highly cultivated, and in the fields about town, it does a deal of miſchief: by the quickneſs of its growth and the great number of its ſhoots, it covers and choaks many young plants; hence it ſhould be carefully weeded from dunghills.

The ſeeds are very beautiful, and have the greateſt affinity to thoſe of the *Ceraſtium aquaticum*.

When the flowers firſt open, the foot-ſtalks which ſupport them are upright; as the flowers go off they hang down; and when the ſeeds become ripe, they again become erected.

LINNÆUS has obſerved that the flowers open from nine in the morning till noon, unleſs rain falls on the ſame day, in which caſe they do not open: from what little obſervations I have made on this plant, it is not ſubject to be affected preciſely in the ſame manner here, having ſeen in the month of March, the bloſſoms continue rather widely expanded after repeated ſhowers of rain.

It is conſidered as a wholeſome food for Chicken and ſmall Birds, whence, as RAY obſerves, it has obtained its name: boiled it reſembles Spinach ſo exactly as ſcarcely to be diſtinguiſhed from it, and is equally wholeſome, being a plant which may be procured almoſt any where very early in the ſpring, it may be no bad ſubſtitute where Spinach or other greens are not to be had in plenty, and much preferable to Nettle-tops and other plants which the lower ſort of people ſeek after in the ſpring with ſo much avidity. Swine are very fond it, and prefer it to Turnep-tops. It is eaten by many Inſects, particularly by the Caterpillar of the *Phalæna Villica or Cream ſpot Tyger Moth*, and other hairy Caterpillars of the Tyger kind.

As a medicine it contains no active principle; but is frequently applied to hot, painful, and inflamatory ſwellings, either by itſelf, bruiſed, or mixed with poultices, with good ſucceſs.

ANTHROPOUS: SCANDIX WITH ROUGH SEEDS.

ERICA TETRALIX. CROSS-LEAVED HEATH.

ERICA *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-phyllus. *Cor.* 4-fida. *Filamenta* receptaculo inſerta. *Antheræ* bifidæ.

Caps. 4-locularis.

Raii Syn. ARBORES ET FRUTICES.

ERICA *tetralix* foliis quaternis ciliatis, floribus capitatis imbricatis.

ERICA *tetralix*, antheris ariſtatis, corollis ovatis, ſtylo incluſo, foliis quaternis ciliatis, floribus capitatis.

Linn. Syſt. Vegetab. p. 302. *Fl. Suecic. n.* 337.

ERICA ex rubro nigricans ſcoparia. *Bauhin Pin.* 486.

ERICA Brabantica folio Coridis hirſuto quaterno. *I. B.* 1. 358.

ERICA pumila Belgarum Lobelio, ſcoparia noſtras. *Parkinſon.* 1482.

ERICA major flore purpureo. *Gerard emac.* 1382 *Raii Syn. p.* 471, Low Dutch Heath or Beſome Heath.

Hudſon Fl. Angl. p. 144. *Oeder Fl. Dan. icon.* 81.

CAULES fruticoſi, dodrantales aut pedales, ramoſi, fuſci, ſcabriuſculi ex relictamentis foliorum.

STALKS ſhrubby, about nine or twelve inches high, branched, roughiſh from the remains of the leaves which have fallen off.

FOLIA *quaterna*, ovato-linearia, patentia, prope flores cauli adpreſſa, marginibus inflexis, *ciliatis*, ciliis glandulâ terminatis, ſuperficie ſuperiore plana, inferiore concava.

LEAVES growing by fours, of an oval-linear ſhape, ſpreading, near the flowers preſſed cloſe to the ſtalk, the edges turned in and *ciliated or hairy*, each of the hairs terminating in a ſmall round globule, the upper ſurface flat, the inferior ſurface concave.

FLORES ſecundi, imbricati, in capitulum congeſti, carnei.

FLOWERS hanging down one over another all one way, forming a little head, of a pale red colour.

CALYX: PERIANTHIUM hexaphyllum, foliolis hirſutis, duo inferiora ovato-lanceolata, cætera linearia, *fig.* 2.

CALYX: a PERIANTHIUM of ſix leaves, the leaves hairy, the two lowermoſt of an oval-pointed ſhape, the reſt linear, *fig.* 2.

COROLLA ovata, monopetala, ore quadrifido, laciniis reflexis, *fig.* 3.

COROLLA oval, monopetalous, the mouth divided into four ſegments, which turn back, *fig.* 3.

STAMINA: FILAMENTA octo, ſubulata, alba, corollâ breviora, receptaculo inſerta; ANTHERÆ ſagittatæ, conniventes, purpureæ, biforaminoſæ, bicornes, *fig.* 4, 5, 6.

STAMINA: eight FILAMENTS, tapering, white, ſhorter than the Corolla, inſerted into the receptacle; ANTHERÆ arrow-ſhaped, cloſing together, purple, having two apertures for the diſcharge of the Pollen, and two little horns, *fig.* 4, 5. 6.

PISTILLUM: GERMEN cylindraceum, ſubſulcatum, villoſum, glandulâ ad baſin cinctum, *fig.* 7, 8; STYLUS filiformis, purpuraſcens, *fig.* 9; STIGMA, obtuſum, *fig.* 10.

PISTILLUM: GERMEN cylindrical, ſlightly grooved, villous, ſurrounded at bottom by a gland, *fig.* 7, 8; STYLE filiform, purpliſh, *fig.* 9. STIGMA blunt, *fig.* 10.

PERICARPIUM: CAPSULA ſubrotunda, villoſa, apice truncata, quadrivalvis, *fig.* 11, 12.

SEED-VESSEL: a roundiſh CAPSULE covered with a kind of down, cut off as it were at top, having four valves, *fig.* 11, 12.

SEMINA plurima, minuta, flaveſcentia, *fig.* 13, 14.

SEEDS numerous, minute, and yellowiſh, *fig.* 13, 14.

THIS ſpecies of *Heath*, though not applicable to ſuch a variety of uſes as ſome of the others, is not inferior to any of them in the beauty and delicacy of its flowers, which in general are of a pale red colour, but ſometimes they occur entirely white.

It is obviouſly enough diſtinguiſhed from the reſt, not only by its flowers growing in a kind of pendulous cluſter on the tops of the ſtalks, but by its leaves alſo, which growing by fours on the ſtalk, form a kind of croſs; theſe are edged with little ſtiff hairs, each of which has a ſmall globule at its extremity.

At the latter end of the Summer it contributes its ſhare with the others to decorate and enliven thoſe large tracts of barren land which too often meet the eye in many parts of this kingdom.

It delights to grow in a moiſter ſituation than ſome of the others, and will thrive well enough in gardens, if taken up either in Spring or Autumn with a quantity of earth about its roots: this is neceſſary, as the *Heaths* in general bear tranſplanting ill.

Erica tetralix

POLYGONUM BISTORTA. THE GREATER BISTORT OR SNAKE-WEED.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.

Raii Synopſis, Genus quintum. HERBÆ FLORE IMPERFECTO SEU STAMINEO, (VEL APETALO POTIUS.)

POLYGONUM *Biſtorta* caule ſimpliciſſimo, monoſtachyo, foliis ovatis in petiolum decurrentibus. *Linnæi Syſt. Vegetab. p.* 311.

POLYGONUM radice lignoſa contorta, ſpica ovata, foliorum petiolis alatis. *Haller. Hiſt. v.* 2. 258.

COLUBRINA Seu Serpentaria fœmina. *Fuſchii icon.* 774.

SERPENTARIA mas ſive Biſtorta. *Fuſchii icon.* 773.

BISTORTA major radice minus intorta. *Bauhin. Pin.* 192.

BISTORTA major radice magis intorta. *Bauhin. Pin.* 192.

BISTORTA major *Gerard emac* 399. *major vulgaris Parkinſon* 391. *Raii Synopſis* 147. *Hudſon. Fl. Angl.* 146. *Flor. Dan. Ic.* 421.

RADIX perennis, craſſitie digiti, plus minuſve intorta, externe caſtanea, interne carnea, fibris et ſtolonibus plurimis inſtructa.

CAULIS pedalis aut bipedalis, *ſimplex*, ſuberectus, ſolidus, articulatus, (geniculi tumidi) teres, lævis.

STIPULÆ vaginantes, apice membranacæ, *marceſcentes, ore obliquo.*

FOLIA cordato-lanceolata, undulata, ſubtus cæruleſcentia, glabra, inferiora in petiolos decurrentia, ſuperiora amplexicaulia in ſtipulas deſinentia.

FLORES ſpicati, ſpica oblongo-ovata, denſa.

BRACTEÆ membranaceæ, marceſcentes, biflores, bivalves, valvula inferiore tricuſpidata cuſpide medio longiore quaſi ariſtata, flores pedicellati, pedicellis calyce longioribus.

CALYX ſive COROLLA ſubovata, quinquepartita, carnea, laciniis ovatis, obtuſis, concavis. *fig.* 1. 3.

STAMINA: FILAMENTA octo, ſubulata, alba, corollâ longiora, ANTHERÆ biloculares, purpuraſcentes, incumbentes. *fig.* 2.

PISTILLUM: GERMEN triquetrum, ſanguineum, STYLI tres longitudine ſtaminum; STIGMATA parva, rotunda. *fig.* 5. 6. 7.

NECTARIUM. glandulæ rubræ in fundo calycis, *fig.* 4.

SEMEN triquetrum, fuſcum, mucronatum, nitens, vernice quaſi obductum. *fig.* 8.

ROOT perennial, the thickneſs of one's finger, more or leſs crooked, externally of a cheſnut, internally of a fleſh colour, furniſhed with numerous fibres and creepers.

STALK from one to two feet high, *ſimple*, nearly upright, ſolid, jointed, (the joints ſwelled,) round and ſmooth.

STIPULÆ encloſing the Stalk as in a ſheath, at top membranous, *withered, the mouth oblique.*

LEAVES: *the bottom leaves* ſomewhat heart ſhaped and pointed; waved at the edges, ſmooth, underneath blueiſh and continued down the footſtalks, the upper leaves embracing the ſtalk, and terminating in the ſtipulæ.

FLOWERS growing thickly in a ſpike, the ſpike of an oblong oval ſhape.

FLORAL LEAVES membranous, and withered, containing two flowers and having two valves, the lower valve three pointed, the middle point running out into a kind of ariſta or beard, the flowers growing on footſtalks which are longer than the Calyx.

CALYX OR COROLLA, of an oval ſhape and fleſh coloured, divided into five ſegements, which are oval, obtuſe, and concave. *fig.* 1. 3.

STAMINA: eight FILAMENTS, tapering, white, and longer than the Calyx; the ANTHERÆ biloculars, purpliſh, and laying acroſs the filaments. *fig.* 2.

PISTILLUM the GERMEN three ſquare, of a deep red colour, three STYLES the length of the Stamina; the STIGMATA ſmall and round. *fig.* 5. 6. 7.

NECTARIUM: ſeveral ſmall red glands in the bottom of the Calyx. *fig.* 4.

SEED: triangular, brown, pointed, and ſhining as if varniſhed. *fig.* 8.

WHEN a Plant not intended to be cultivated, in any reſpect prevents the growth of one which is the object of Cultivation, ſuch a plant, however beautiful, may with propriety be called a Weed; nor will the elegance or utility of the Biſtort, ſecure it in the eſtimation of the Farmer, from that appellation.

This Plant generally grows in moiſt Meadows, and flowers in May and June; when it has once taken root, it propagates very faſt, and frequently will form large patches, to the excluſion of a conſiderable portion of the Graſs; nor is it deſtroyed but with the greateſt difficulty. Happily, our Farmers about Town are pretty much ſtrangers to this Plant, as it is met with but rarely. It grows plentifully in a Meadow by the ſide of *Biſhop's Wood* near *Hampſtead*, and my obliging Friend Dr. ALLEN informs me he has found it about *Batterſea.*

As an aſtringent Medicine, the Biſtort appears to poſſeſs conſiderable virtue, and as ſuch may with propriety be made uſe of in all caſes where aſtringents are required; but more particularly in long continued evacuations from the Bowels, and other diſcharges both ſerous and ſanguineous. It is recommended alſo to faſten teeth which are looſe, and may be uſed either in powder, infuſion, or extract. If it could be procured in ſufficient quantity to make it anſwer, it might well be applied to the purpoſe of tanning Leather.

In ſome parts of England the leaves are eat as a Pot-herb.

Polygonum Bistorta.

Holburn pinxit et sculpt

Polygonum Persicaria.

Fillbrook pinxit et sculpsit

POLYGONUM PERSICARIA. COMMON SPOTTED PERSICARIA.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.
Raii Syn. Gen. 5 HERBÆ FLORE IMPERFECTO SEU STAMINEO, VEL APETALO POTIUS.
POLYGONUM *Perſicaria* floribus hexandris ſemidigynis, pedunculis lævibus, ſtipulis ciliatis, ſpicis ovato-oblongis erectis.
POLYGONUM *Perſicaria* floribus hexandris digynis, ſpicis ovato-oblongis, foliis lanceolatis, ſtipulis ciliatis, *Lin. Syſt. Vegetab. p.* 312. *Flor. Suecic. p.* 130.
POLYGONUM foliis ovato-lanceolatis, ſubhirſutis, ſpicis ovatis, vaginis ciliatis. *Haller. hiſt. Helv. v.* 2. *p.* 257.
PERSICARIA mitis maculoſa et non maculoſa. *Bauhin. Pin. p.* 101.
PERSICARIA maculoſa *Gerard. emac.* 445. vulgaris mitis ſeu maculoſa. *Parkinſon.* 856. *Raii Syn. ed.* 3. *p.* 145. *n.* 4. Dead or ſpotted Arſmart. *Hudſon Flor. Angl. p.* 147. *n.* 4. *Scopoli Fl. Carniol p.* 279.

RADIX ſimplex, fibroſa.
CAULIS erectus, ad baſin aliquando repens, pedalis ad tripedalem, ramoſus, teres, glaber, ad geniculos ſenſim incraſſatus, ſæpe rubens: ſub geniculis puncta radicalia diſcernantur quamvis huic ſpeciei non propria.

RAMI alterni, e ſingulo geniculo prodeuntes, patentes, ſæpe diffuſi.
STIPULÆ vaginantes, liquore viſcido ſæpe repletæ, ciliatæ.
FOLIA lanceolata, ſubpetiolata, margine nervoque medio ſubhirſutis, utrinque lævia, maculâ ferrum equinum quodammodo referente ſæpius notata.

PEDUNCULI læves.
FLORES ſpicati, roſei, Spicæ terminales, erectæ, ſubovatæ.

CALYX: PERIANTHIUM quinquepartitum, coloratum, perſiſtens, ſegmentis ovatis obtuſis, *fig.* 1, 2.

COROLLA nulla.
STAMINA: FILAMENTA ſex fundo calycis inſerta longitudine corollæ ANTHERÆ rubentes, *fig.* 2.

PISTILLUM: GERMEN ovatum, compreſſum, aut triquetrum, *fig.* 3, 6. STYLUS *ad medium uſque bifidus ſæpe trifidus, fig.* 5, 8. STIGMATA duo aut tria ſubrotunda, *fig.* 4, 7.
SEMEN unicum, nitidum, aut ſubovatum, acuminatum, ad unum latus leviter convexum; *fig.* 9, 11, aut trigonum, *fig.* 10, 12.

ROOT ſimple and fibrous.
STALK upright, ſometimes creeping at bottom, from one to three feet high, branched, round, ſmooth, gradually thicker at the joints, often of a red colour: a little beneath each joint ſome radical points are obſervable, which however are not peculiar to this ſpecies.
BRANCHES alternate, proceeding from each joint, ſpreading, frequently very much ſo.
STIPULÆ embracing the ſtalk, frequently full of a viſcid liquid, and terminated by long ciliæ or hairs.
LEAVES lanceolate, with ſhort foot-ſtalks, the edge and midrib ſlightly hairy, ſmooth on both ſides, in general having a large ſpot on the middle of the leaf ſomewhat like a horſe ſhoe.
FOOT-STALKS of the flowers, ſmooth.
FLOWERS growing in ſpikes, of a bright roſe colour, the ſpikes terminal, upright, of a ſomewhat oval ſhape.
CALYX: a PERIANTHIUM divided into five ſegments, coloured, and perſiſting, the ſegments oval and obtuſe, *fig.* 1, 2.
COROLLA wanting.
STAMINA: ſix FILAMENTS inſerted into the bottom of the Calyx, the length of the Corolla; the ANTHERÆ rediſh, *fig.* 2.
PISTILLUM: GERMEN oval and flat, or three-ſquare, *fig.* 3, 6. STYLE *divided down to the middle into two, often into three parts, fig.* 5, 8. STIGMATA two or three, and round, *fig.* 4, 7.
SEED one, ſhining, either of an oval pointed ſhape and ſlightly convex on one ſide, *fig.* 9, 11. or three-ſquare, *fig.* 10, 12.

The very great ſimilarity which exiſts between the ſeveral ſpecies of the Polygonums, has occaſioned no ſmall degree of trouble to Botaniſts, in rightly aſcertaining the limits of each Species and Variety; a difficulty not to be overcome while Books are conſulted more than Nature. Senſible of the truth of this obſervation, and earneſtly deſirous of arriving at ſome certainty on this ſubject, we have examined a vaſt number of all the different Species and Varieties of Polygonum which our neighbourhood affords, compared them with one another, ſown the ſeeds, and cultivated many of them; and if we do not deceive ourſelves, have reduced ſome of the more difficult ones to their true Species and Varieties.

As what we relate concerning theſe plants is no more than the reſult of the moſt accurate and repeated inveſtigation, aſſiſted by the microſcope, we ſhall be the leſs concerned becauſe we differ from Authors of the moſt reſpectable Authority.

The writer who gives an account of all the known plants in the univerſe, cannot be ſuppoſed to have the opportunity of being ſo minute in his enquiries as one who deſcribes the plants of a particular ſpot, which as they grow are conſtantly the objects of his attention.

We have ventured to alter Linnæus's Specific deſcription of this plant, which ſtands thus.

Polygonum floribus hexandris digynis, ſpicis ovato-oblongis, foliis lanceolatis, ſtipulis ciliatis. to
Polygonum floribus hexandris ſemidigynis, pedunculis lævibus, ſtipulis ciliatis, ſpicis ovato-oblongis erectis.

We have not made this alteration from an idle deſire of differing from ſo great a Man, whom we truly reſpect and revere, but ſolely to make the diſtinctions betwixt thoſe plants more obvious, and thereby add our mite to the general ſtock of Botanic knowledge. In ſpecific deſcriptions, the diſtinguiſhing marks ſhould as much as poſſible be contraſted or oppoſed to each other, in theſe plants this does not ſeem to have been ſufficiently attended to. What we have principally in view by altering the Specific deſcription is to diſtinguiſh it from the *Polygonum Penſylvanicum* and its varieties, of which there are ſeveral, and to which the *Polygonum Perſicaria* in its general habit is exceeding nearly allied.

In all the flowers of this Species which we have examined, the Style has been divided juſt *half way down*, hence we have called the flowers *Semidigyni*, had it been divided down to the baſe they would with propriety have been called *Digyni*. In moſt of the flowers the Style is divided into two parts, and the Germen is a little convex on each ſide, in ſome of the flowers the ſtyle is divided into three, hence thoſe flowers might be called *Semitrigyni*, and when this is the caſe the Germen is always triangular. In the *Polygonum Penſylvanicum* the Style is divided *nearly to the baſe*, this difference then in the diviſion of the Style, is of conſiderable conſequence in diſtinguiſhing the two Species and their varieties from each other.

The footſtalks which ſupport the flowers in this Species, are quite ſmooth, in the *Polygonum Penſylvanicum*, they are beſet with a great number of minute glands, which gives them a manifeſt roughneſs, and contributes to characteriſe that Species.

The Stipulæ are furniſhed with long Ciliæ or Hairs, particularly towards the top of the plant, in the *Polygonum Penſylvanicum* theſe are wanting. Theſe two plants likewiſe differ much in the form of their ſeeds, of which we ſhall ſpeak more fully in our account of the latter.

The flowers always grow in upright ſpikes of an oval ſhape more or leſs round; by theſe two characters this Species is at once diſtinguiſhed from the *Polygonum Hydropiper*, the ſpikes of which are *filiform and pendulous*.

The leaves are moſt commonly ſpotted, but this is neither conſtant nor peculiar to this Species, and difference of ſize only forms the principle variety to which it is ſubject.

It grows exceedingly common in all our Ditches, and flowers in Auguſt and September; its bloſſoms are beautiful and laſt a conſiderable time, was it not ſo common, it would probably be thought worthy of a place in our Gardens.

No particular virtues or uſes are attributed to it.

POLYGONUM PENSYLVANICUM. PALE-FLOWERED PERSICARIA.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALA POTIUS.)

POLYGONUM floribus hexandris, digynis; ſtipulis muticis; pedunculis ſcabris; ſeminibus utrinque depreſſis.

POLYGONUM floribus octandris digynis, pedunculis hiſpidis, foliis lanceolatis, ſtipulis muticis.

Linnæi Syſt. Vegetab. Sp. Plant. p. 519.

PERSICARIA mitis major foliis pallidioribus. *D. Bobarti, Dead Arſmart the greater with pale leaves.*

Raii Syn. ed. 3. *p.* 145. *Hudſon Fl. Angl. p.* 148.

RADIX fibroſa, annua.

CAULIS tripedalis circiter, teres, glaber, fiſtuloſus, ramoſus; rami patentes, geniculis maxime incraſſatis.

FOLIA ovato-lanceolata, ſupra glabra, ſubtus glandulis punctata, ſæpe pubeſcentia, ciliata, nunc maculata nunc immaculata.

PETIOLI ſubtus hirſuti, ſcabriuſculi.

STIPULÆ baſi nervoſæ, muticæ.

PEDUNCULI pilis brevibus glanduliferis ſcabri. *fig.* 1.

FLORES herbacei, pedunculis brevibus inſidentes, denſe glomerati, ſpicæ ovatæ, ſeminibus maturis ſubnutantes.

CALYX: PERIANTHIUM quinquepartitum, laciniis ovatis, obtuſis, *fig.* 2, 3.

COROLLA nulla.

STAMINA: FILAMENTA ſex, ſubulata, alba, Corollâ paulo breviora; ANTHERÆ biloculares; POLLEN globoſum, *fig.* 4.

PISTILLUM: GERMEN ſubovatum; STYLUS fere ad baſin diviſus; STIGMATA duo ſubrotunda, *fig.* 5, 6.

SEMEN cordatum, acuminatum, compreſſum, *medio depreſſum*, nitidum, *fig.* 9, 10, magnit. nat. *fig.* 7, 8, lente auct. ſubinde obtuſe triquetrum, *fig.* 12.

ROOT fibrous and annual.

STALK about three feet high, round, ſmooth, hollow, branched, the branches ſpreading, and the joints very much ſwelled.

LEAVES of an oval pointed ſhape, ſmooth on their upper ſurface, underneath dotted with ſmall glands, and often downy, edged with little hairs, ſometimes with and ſometimes without ſpots.

FOOT-STALKS of the leaves hairy underneath, with a ſlight roughneſs to the touch.

STIPULÆ rib'd at bottom, and not terminated by any hairs.

FOOT-STALKS of the flowers rough with little glands. *fig.* 1.

FLOWERS of a greeniſh colour, ſitting on ſhort foot-ſtalks, and growing thickly together; ſpikes oval, and when the ſeeds are ripe drooping a little.

CALYX: a PERIANTHIUM divided into five ſegments, which are oval and obtuſe, *fig.* 2, 3.

COROLLA wanting.

STAMINA: ſix FILAMENTS, tapering, white, a little ſhorter than the Corolla; ANTHERÆ bilocular; POLLEN globular, *fig.* 4.

PISTILLUM: GERMEN ſomewhat oval; STYLE divided nearly down to the baſe; STIGMATA two, roundiſh, *fig.* 5, 6.

SEED heart-ſhaped, pointed, flat, *with a depreſſion in the middle*, ſhining, *fig.* 9, 10, of its natural ſize, *fig.* 7, 8, magnified, ſometimes obtuſely triangular, *fig.* 12.

The plant here figured, is the *Perſicaria mitis major foliis pallidioribus, D. Bobarti*, and which is particularly deſcribed in the 3d. edition of RAY's *Synopſis, p.* 145: from the conſonancy of this deſcription, with that which LINNÆUS had given of the *Polygonum Penſylvanicum*, in the 3d. edition of his *Speices Plantarum*, Mr. HUDSON ſet it down in his *Flora* as that ſpecies: and LINNÆUS, in the laſt edition of his *Syſtema Vegetab.* as a confirmation of our Engliſh *Polygonum's*, being the ſame with his *Penſylvanicum*, quotes BOBART'S deſcriptive name.

By RAY, LINNÆUS, and HUDSON, then, it is made a diſtinct ſpecies; by HALLER it is conſidered as a variety of the *Polygonum Perſicaria*; but as the Baron forms his judgment from dried ſpecimens that were ſent him, in which many of the diſtinguiſhing characters of this plant would be unavoidably loſt, he ſeems the moſt likely to be miſtaken: I ſhall therefore join in making it a diſtinct ſpecies; and I truſt ſhall give ſuch ſtriking additional characters, as will ſettle this matter beyond diſpute.

The true *Polygonum Penſylvanicum* (for there are ſeveral varieties of it) has the greateſt affinity with the *Polygonum Perſicaria*, but differs from it in the following particulars, *viz.* place of growth, ſize, ſtipulæ, leaves, foot-ſtalks of the leaves, foot-ſtalks of the flowers, ſtyle, and ſeeds.

While the *Polygonum Perſicaria* uſually delights to grow by the ſides of moiſt ditches, the *Penſylvanicum* prefers a richer and more luxuriant ſoil; and ſo common is it with us about town, that there is ſcarce a dunghill on which it may not be found: indeed in its attachment to this particular ſoil, it reſembles many of the *Chenopodiums* or *Oraches*. Was it never to occur in other ſituations, ſome might be ready to ſuſpect that it was a variety of the *Perſicaria* ariſing from richneſs of ſoil; but it is frequently found in other places: and I remember once to have ſeen the *Polygonum Perſicaria*, *Hydropiper*, and *Penſylvanicum*, all growing by the ſide of a ſtream within ſix inches of each other.

In its moſt common ſtate it is much larger than the *Polygonum Perſicaria*, and its joints in particular are more ſwelled; its Stipulæ are much more ſtrongly rib'd at bottom, and have no Ciliæ; its leaves are broader, the veins ſomewhat deeper, and more ſtrongly marked; the hairs on the edges of the leaves more viſible, but particularly ſo under the foot-ſtalk of the leaf, to which they give a manifeſt roughneſs: in the uppermoſt leaves the under ſide is generally dotted with very minute glands, while in the lowermoſt it is covered with a kind of down: this laſt character, though contrary to what LINNÆUS aſſerts, is never ſeen in the *Polygonum Perſicaria*; but in this ſpecies it is always more or leſs predominant. The foot-ſtalks of the flowers are thickly beſet with little yellowiſh glands, ſtanding on ſhort foot-ſtalks, which ſometimes extend half way down the plant; this appearance never or exceeding rarely occurs in the *Polygonum Perſicaria*: the flowers are of a pale or greeniſh hue, and form thicker and larger ſpikes than in the *Polygonum Perſicaria*, and when ripe are ſo heavy as frequently to hang down a little: the Style is divided very nearly down to the Germen, while in the *Polygonum Perſicaria* it is divided only half way; and *this diviſion of the Style*, I look upon as one of the moſt conſtant and certain criteria of this ſpecies: laſtly the form of the ſeeds contributes not a little to the farther aſcertaining and fixing it; in the *Perſicaria* the ſeeds are either triangular, or of a pointed oval ſhape, with a little *convexity* on each ſide; in this ſpecies it is in general flat, with a *depreſſion* on each ſide; it is alſo larger and broader; now and then a ſeed occurs forming an unequal triangle, but theſe are very rare, while the triangular ſeed is moſt frequent in the *Polygonum Perſicaria*.

Polygonum Pensylvanicum

Polygonum Pensylvanicum var. caule maculato.

POLYGONUM PENSYLVANICUM. VAR. CAULE MACULATO.

SPOTTED-STALK'D PERSICARIA.

PERSICARIA latifolia geniculata, caulibus maculatis. *D. Rand. Raii Syn. p.* 145.

PERSICARIA maculoſa procumbens foliis ſubtus incanis. *Raii Syn. p.* 146. eadem eſt planta ſolo autem minus læto proveniens.

Such then is the difference, which from repeated examinations, I have been able to diſcover betwixt the *Polygonum Perſicaria* and the *Penſylvanicum* in its moſt common ſtate; in this ſtate however it does not always occur, but is ſubject to more Varieties than any of our other *Perſicaria's:* without any deſire of multiplying them, I make the following, having found them all about *London:*

1 *Polygonum Penſylvanicum. var. caule et floribus rubris.*
2 . . . . . *caule maculato.*
3 . . . . . *foliis ſubtus incanis.*

The firſt of theſe varieties is very often found with the true ſpecies on dunghills, as alſo in corn-fields, and is like it in every reſpect excepting its colour, the ſtalks and flowers being red, but not ſo beautifully bright as thoſe of the *Polygonum Perſicaria.*

The ſecond variety here figured, which indeed comes near to a diſtinct ſpecies, grows much in the ſame ſituations, and oftentimes with the *Polygonum Perſicaria* in the ditches about *St. Georges-fields*, particularly in a large ditch on the right-hand ſide of the road between the end of *Blackman-Street* and *Newington*, where it is very common in the month of *September.* It not only differs from the other in having its ſtalk ſpotted with red, a character which it keeps very conſtantly, but its ſpikes are much ſlenderer, rather more ſo even than thoſe of the *Perſicaria*, of a red colour, but not quite ſo bright as thoſe of that plant: the under ſide of the foot-ſtalk of the leaves is remarkably rough; the little glands on the foot-ſtalks of the flowers, and the parts of the fructification are ſimilar to thoſe of the true ſpecies, but the ſeeds are ſmaller: when this variety grows in the rich ſoil abovementioned, it is full as large as the *Penſylvanicum* itſelf; but when it grows in a different ſoil and ſituation, as on the watery parts of *Blackheath* and *Peckham-Rye*, it becomes much ſmaller, generally has its leaves white underneath, and will certainly be taken for the *Polygonum Perſicaria* if not attentively examined: its ſpotted ſtalk and the roughneſs of the foot-ſtalks of the leaves will however readily diſcover it.

The third variety, with leaves hoary on the under ſide, is found here and there in corn-fields and other places, where the ſoil is not very rich, and is obviouſly enough diſtinguiſhed.

Beſides theſe ſtriking varieties, it is ſubject, like all other plants, to vary in ſize according to the richneſs or poverty of the ground on which it grows, and like the *Polygonum Perſicaria*, its leaves are ſometimes ſpotted and ſometimes not.

This deſcriptive account will perhaps appear tedious and unintereſting to ſome; if however by theſe practical obſervations, the obſcurity which has hitherto dwelt on this difficult Genus, ſhall in ſome degree be removed, and the road of inveſtigation made eaſier to the young Botaniſt, I ſhall think my time uſefully employed; I would not however wiſh him to take upon truſt what is here advanced, but to examine each plant and its ſeveral parts for himſelf; thus he will become improved, and be able perhaps to throw a ſtill greater light on the ſubject.

The Sparrow and other ſmall Birds are very fond of the ſeeds of this ſpecies and its varieties: but the Farmer ſhould carefully weed them from his dunghills.

POLYGONUM HYDROPIPER. BITING PERSICARIA OR WATER PEPPER.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.

Cal. o. *Cor.* 5-partita, calycina. *Sem.* 1, angulatum.

Rai Syn. Gen. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

POLYGONUM *Hydropiper* floribus hexandris ſemidigynis; foliis lanceolatis, undulatis, immaculatis; ſpicis filiformibus nutantibus.

POLYGONUM *Hydropiper* floribus hexandris ſemidigynis, foliis lanceolatis, ſtipulis ſubmuticis. *Linn. Syſt. Vegetab. p.* 312.

POLYGONUM foliis ovato lanceolatis, ſpicis florigeris, vaginis calvis. *Haller. hiſt. p.* 256. *n.* 1554.

POLYGONUM *Hydropiper. Scopoli Fl. Carniol. n.* 467.

PERSICARIA urens ſeu Hydropiper. *Bauhin. pin.* 101.

PERSICARIA vulgaris acris ſeu minor. *Parkinſon.* 856.

HYDROPIPER. *Gerard. emac.* 445. *Raii Syn. p.* 144. Water-pepper, Lakeweed or Arſmart. *Hudſon Fl. Angl. p.* 148.

RADIX annua, fibroſa.
CAULIS erectus, ramoſus, baſi nonnunquam repens, pedalis ad tripedalem, geniculis incraſſatis, demum ruberrimus.
FOLIA lanceolata, *undulata*, e viridi flaveſcentia, glabra.

STIPULÆ ciliatæ.
FLORES ſpicati, *ſpicæ tenues, demum nutantes.*

CALYX: PERIANTHIUM quadripartitum, *glandulis minimis adſperſum*, laciniis obtuſis, concavis, *fig.* 1, 2, 3.
COROLLA nulla.
STAMINA: FILAMENTA ſex alba; ANTHERÆ albæ biloculares, *fig.* 3.
PISTILLUM: GERMEN ovatum; STYLUS bifidus, ad medium uſque diviſus; STIGMATA duo, rotunda, *fig.* 4, 5.
SEMEN ovato-acuminatum, caſtaneum, *fig.* 6.

ROOT annual and fibrous.
STALK upright, branched, ſometimes creeping at bottom, from one to three feet high, the joints ſwelled, finally becoming very red.
LEAVES lanceolate, *waved*, of a yellowiſh green colour and ſmooth.
STIPULÆ ciliated.
FLOWERS growing in ſpikes, *which are ſlender and finally drooping.*
CALYX: a PERIANTHIUM divided into four ſegments, *ſprinkled with very minute glands*, the ſegments blunt and hollow, *fig.* 1, 2, 3.
COROLLA wanting
STAMINA ſix white FILAMENTS; ANTHERÆ white and bilocular, *fig.* 3.
PISTILLUM: GERMEN oval; STYLE bifid, divided down to the middle; two round STIGMATA, *fig.* 4, 5.
SEEDS of an oval pointed ſhape, and cheſnut colour, *fig.* 6.

It is one of the maxims laid down by the Author of that ſyſtem of Botany which at preſent is ſo deſervedly held in eſteem, and which I truſt for the ſake of this delightful ſcience will for ever withſtand the attempts of all thoſe who frame ſyſtems merely to raiſe themſelves into conſequence, that in all ſpecific deſcriptions taſte is to be excluded: ſome may perhaps be ready to treat this as too dogmatical, but when they come to find that both the *Hydropiper* and *Sedum acre*, plants which in general are very hot and biting, ſometimes are found inſipid, they will readily adopt it as founded in ſtrict propriety.

The preſent ſpecies of Polygonum very properly receives its name of *Hydropiper* from its hot and biting taſte, which appears to ariſe from its eſſential oil diſperſed in little cells or glands all over the plant, but more particularly obſervable on the Calyx with a ſmall magnifier, and which, if taſted, will be found to be more biting than any other part of the plant: this quality which is peculiar to the *Hydropiper*, generally leaves a ſtrong Idea of the plant on the mind of the Tyro: but it is has other more invariable characters whereby it may be diſtinguiſhed. Notwithſtanding its obvious difference from the other plants of this genus, apparent even to ſuch as know very little of Botany, both SCOPOLI and HALLER ſeem to entertain doubts whether it be really diſtinct from the *P. Perſicaria* and *P. minus*.

The three plants as they uſually grow, and I have ſeen them all three grow together, are certainly diſtinct enough: but there are ſome intermediate varieties which bring them very near together, and perhaps juſtify ſuch ſuſpicions: a variety of the *Hydropiper*, ſcarce differing in any other reſpect but its inſipidity, I have now and then met with in the ſame ſituation as we uſually find the true ſpecies: from the *P. Perſicaria* it differs principally in its leaves, ſpikes, form and ſize of its ſeeds; and firſt its leaves are of a yellower hue, more undulated, and never marked with any ſpots; its ſpikes are ſlender, and when the ſeeds are ripe they bend and hang down; the ſeeds are much larger, more acuminated, and of a cheſnut colour; its ſtipulæ are very evidently ciliated; though HALLER makes their want of ciliæ one of its ſtriking characters; and LINNÆUS alſo calls them *ſubmuticæ*, which certainly tends to miſlead.

It is the only *Perſicaria* that has any pretenſions to be an active medicine: given in infuſion or decoction it proves diuretic, hence it is made uſe of in the Dropſy and Jaundice; and the diſtilled water of it is recommended by BOYLE as efficacious in the Stone and Gravel: LINNÆUS informs us that the plant will dye Woolen cloth of a yellow colour.

Although the herb is ſo acrid, the ſeeds are inſipid and nutritive.

It is found in great abundance in all thoſe places which lie under water during the Winter, flowers in September, generally a month later than the *P. Perſicaria*: in expoſed places it becomes very red in going off.

Polygonum Hydropiper.

1 2 3 4 5 6

Polygonum aviculare.

1 2 3 4

POLYGONUM AVICULARE. BIRDS POLYGONUM OR KNOT-GRASS.

POLYGONUM *Linnæi Gen Pl.* OCTANDRIA TRIGYNIA.

Cal. 0. *Cor.* 5-*partita, Calycina. Sem.* 1. *angulatum.*

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO. (VEL APETALA POTIUS.)

POLYGONUM *aviculare* floribus octandris trigynis axillaribus, foliis lanceolatis, caule procumbente herbaceo. *Linn. Syſt. Vegetab. p.* 312. *Sp. Pl.* 519. *Fl. Suecic. n.* 339.

POLYGONUM procumbens, foliis linearibus, acutis, floribus ſolitariis. *Haller hiſt. n.* 1560.

POLYGONUM *aviculare. Scopoli Fl. Carniol. n.* 471.

POLYGONUM mas vulgare. *Gerard emac.* 451.

POLYGONUM mas vulgare majus. *Parkinſon* 443.

POLYGONUM ſeu Centinodia. *I. Bauhin* 3. 374. *Raii Syn. p.* 146. *Hudſon Fl. Angl. p.* 149.

RADIX annua, ſimplex, lignoſa, multis fibris donata, terram firmiter apprehendens ut extirpatu difficilis ſit, ſapore adſtringente.

ROOT annual, ſimple, woody, furniſhed with many fibres, taking ſtrong hold of the earth, ſo as to be with difficulty pulled up, and of an aſtringent taſte.

CAULES plures, plerumque procumbentes, interdum vero ſuberecti, dodrantales, ramoſi, tenues, ſtriati, læves, teretes, geniculati, ad geniculos paululum incraſſati.

STALKS ſeveral, generally procumbent, ſometimes nearly upright, about nine inches in length, branched, ſlender, ſtriated, ſmooth, round, jointed, the joints a little ſwelled.

FOLIA quam maxime variantia, ovata, lanceolata aut etiam linearia, alterna, lævia, e vaginis ſtipularum prodeuntia.

LEAVES varying exceedingly, oval, lanceolate, or ſometimes even linear, alternate, ſmooth, proceeding from the ſheaths of the Stipulæ.

STIPULÆ vaginantes, membranaceæ, albidæ, nitidæ, apice fibroſæ.

STIPULÆ forming a ſheath round the joints, membranous, white, ſhining, at top fibrous.

FLORES axillares, e vaginis ſtipularum cum foliis prodeuntia.

FLOWERS axillary, proceeding with the leaves from the ſheaths of the Stipulæ.

CALYX : PERIANTHIUM quinquepartitum, laciniis ovatis concavis, patentibus, dimidio inferiore viridi, ſuperiore albo, ſæpe colorato, *fig.* 1, 2.

CALYX : a PERIANTHIUM divided into five ſegments, the laciniæ oval, concave and ſpreading, the lower half green, the upper half white and often coloured, *fig.* 1, 2.

COROLLA nulla.

COROLLA wanting.

STAMINA : FILAMENTA octo corolla breviora ; ANTHERÆ flavæ, *fig.* 2, auct.

STAMINA : eight FILAMENTS ſhorter than the Corolla, ANTHERÆ yellow, *fig.* 2, magnified.

PISTILLUM : GERMEN triquetrum ; STYLUS longitudine ſtaminum, trifidus ; STIGMATA tria, rotunda, *fig.* 3, auct.

PISTILLUM : GERMEN triangular ; STYLE the length of the Stamina, trifid ; STIGMATA three, round, *fig.* 3, magnified.

SEMEN triquetrum, nigricans, intra calycem, *fig.* 4.

SEED triangular, of a blackiſh colour, contained within the Calyx, *fig.* 4.

Thoſe plants which have been obſerved to be eaten by cattle, have often obtained the name of *Graſs*, although they have not poſſeſſed the leaſt ſimilitude to thoſe which are real Graſſes, and the preſent plant is one of theſe. Cattle in general are fond of it, and hogs in particular eat it with great avidity. The ſeeds afford ſuſtenance to many of the ſmall birds, whence it has acquired the name of *aviculare*. The Caterpillar of the **Phalæna rumicis* (with us the *Knot-graſs Moth,*) I have frequently found feeding on its leaves, although it is by no means confined to this plant : in *Sweden*, LINNÆUS informs us it feeds on the *Dock (Rumex,)* and *Sow-thiſtle.*

This ſpecies of *Polygonum* may be conſidered as one of our moſt common plants ; it delights to grow in a ſandy or gravelly ſoil, on banks, and by the ſides of roads and paths, being of quick growth, and ſpreading a great deal of ground ; it often covers whole fields, that by turning in of cattle, have had their natural coat of graſs deſtroyed.

Where a plant of this ſpecies happens to grow ſingly in a rich ſoil, it will often cover the ſpace of a yard or more in diameter, and the leaves become broad, and large ; but when it grows very thick together, by the ſides of paths, it is in every reſpect ſmaller, and the ſtalks are more upright. It is ſubject, like moſt other plants, to ſeveral varieties, and of theſe are the *Polygonum brevi anguſtoque folio*, and the *Polygonum oblongo anguſtoque folio* of *C. Bauhine.*

It has been conſidered by antient writers, as poſſeſſing ſome medical virtue, particularly as an Aſtringent, and is by them recommended in Diarrhæas, Dyſenteries, Bleeding at the noſe, and other Hemorrhages ; but in the preſent practice, its uſe ſeems juſtly ſuperſeded by more efficacious medicines.

* *Vid. Linn. Faun. Suecic. p.* 318. *n.* 1200. *Roeſel. el.* 2. *Pap. Noct. t.* 27. *Albin Inſect. pl.* 22.

Polygonum minus.

POLYGONUM MINUS. SMALL, CREEPING, NARROW-LEAVED PERSICARIA.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.

Cal. o. *Cor.* 5-partita calycina. *Sem.* 1, angulatum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALA POTIUS.

POLYGONUM *minus* floribus hexandris, ſubmonogynis, foliis lineari-lanceolatis, caule baſi repente.

POLYGONUM *minus* hexandris digynis foliis lanceolatis, ſtipulis ciliatis, caule divaricato patulo. *Hudſon Fl. Angl. p.* 148.

POLYGONUM foliis ovato-lanceolatis, glabris, ſpicis ſtrigoſis, vaginis ciliatis. *Haller. hiſt. p.* 257. *n.* 1555.

PERSICARIA minor. *Bauhin Pin.* 1014? anguſtifolia. *Bauhin Pin.* 101. 3?

PERSICARIA puſilla repens *Ger. emac.* 446. *Parkinſon.* 857. *Raii Syn.* 145. 2. Small Creeping Arſmart.

PERSICARIA anguſtifolia ex ſingulis geniculis florens. *Mer. Pin.* 90? *Raii Syn.* 145. 3. Narrow-leaved Lakeweed.

RADIX annua, fibroſa.

CAULES plures, dodrantales, aut pedales, *baſi repentes*, demum ſuberecti, geniculati, (geniculis paululum incraſſatis,) læves, rubicundi.

FOLIA *lineari-lanceolata*, pene avenia, ſuperne glabra.

STIPULÆ vaginantes, ciliatæ.

SPICÆ tenues, parum nutantes, e ſingulis geniculis prodeuntes.

CALYX: PERIANTHIUM quinquepartitum, perſiſtens, coloratum, laciniis obtuſis concavis, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA ſex; ANTHERÆ biloculares, albæ, intra Corollam.

PISTILLUM: GERMEN ovatum aut triangulare; STYLUS filiformis, apice bifidus aut trifidus; STIGMATA duo aut tria rotunda, reflexa, *fig.* 2, 3.

SEMEN aut ovato-acutum aut triangulare, caſtaneum, magnitudinis fere et formæ ſeminis Polygoni Perſicariæ, *fig.* 4, 5.

N. B. Omnes partes fructificationis lente augentur.

ROOT annual, and fibrous.

STALKS ſeveral, about nine inches or a foot high, *creeping at bottom*, then becoming nearly upright, jointed, (the joints ſomewhat thickened,) ſmooth, of a reddiſh colour.

LEAVES *betwixt linear and lanceolate*, ſcarcely any appearance of veins, on thier upper ſurface ſmooth.

STIPULÆ forming ſheaths round the joints, and ciliated.

SPIKES ſlender and a little drooping, proceeding from each joint of the ſtalk.

CALYX: a PERIANTHIUM divided into five ſegments, which are obtuſe and hollow, *fig.* 1.

COROLLA wanting.

STAMINA ſix FILAMENTS; ANTHERÆ bilocular, and white, within the Corolla.

PISTILLUM: GERMEN oval or triangular; STYLE filiform, at top bifid or trifid; STIGMATA two or three, round and turned back, *fig.* 2, 3.

SEEDS oval or triangular, of a cheſnut colour, nearly of the ſame ſize and ſhape as the Polygonum Perſicaria, *fig.* 4, 5.

N. B. All the parts of the fructification are magnified.

If the opportunity of ſeeing this plant growing wild had ever occured to the celebrated Swediſh Botaniſt, he would doubtleſs have conſidered it as a diſtinct ſpecies; at preſent he has placed it in the laſt edition of his works, the *Syſtema Vegetabilium*, as a variety of the *Polygonum Perſicaria*, probably miſled by dried ſpecimens of the plant: thoſe who truſt to ſuch are exceeding liable to deceive both themſelves and others, particularly in plants whoſe parts of fructification (from which it is ſometimes neceſſary to draw ſpecific differences) are very minute—thoſe in the living plants are with difficulty enough diſtinguiſhed, and in dried ſpecimens not to be inveſtigated.

Whoever has obſerved the appearance which the *Polygonum minus* and *Perſicaria* uſually put on, muſt have been ſtruck with the great diſſimilarity of the two in their general habits; and if they have taken the pains to examine the parts of fructification, they will, I am perſwaded, be convinced that both Mr. RAY and HUDSON are juſtifiable in making them diſtinct ſpecies.

It differs from the *Polygonum Perſicaria* in its ſize, growth of its ſtalk, ſhape of its leaves, form of its ſpikes, and diviſion of its Piſtillum. In height it ſeldom exceeds a foot, whereas the *Perſicaria* often occurs a yard high; the ſtalk of this ſpecies creeps at bottom, in the *Perſicaria* it never does: it is true in the *Perſicaria*, and moſt of the *Polygonums*, a number of little roots puſh themſelves out at the joints, which are next the ground; but in this ſpecies the ſtalk at bottom is abſolutely procumbent, whilſt in the *Perſicaria* it is always upright; the leaves are much narrower, approaching rather to linear than lanceolate, and on their upper ſurface have much leſs appearance of veins, than in the *Perſicaria*; the ſpikes, inſtead of being oval or nearly round, and upright, as in the *Perſicaria*, are ſlender and a little drooping: the Piſtillum, which is a part of very great conſequence in determining many of the ſpecies and varieties of this genus, is ſlightly divided at top only; while that of the *Perſicaria* is divided half way down; hence as I have called that ſpecies *ſemidigynous*, I have called this *ſubmonogynous*.

Hitherto I have met with this plant growing wild no where but in *Tothill-fields, Weſtminſter*, where it makes ample amends for its ſcarcity elſewhere, being found in the greateſt abundance in the watry parts of thoſe fields, along with the *Siſymbrium ſylveſtre* in the month of September, when it is in full bloom.

At preſent it does not appear that it has any thing more than its ſcarcity to recommend it to our notice.

BUTOMUS UMBELLATUS. FLOWERING RUSH,

OR WATER GLADIOLE.

BUTOMUS UMBELLATUS. FLOWERING RUSH, OR WATER GLADIOLE.

BUTOMUS *Linnæi Gen. Pl.* ENNEANDRIA HEXAGYNIA.

Raii Gen. 17. HERBÆ MULTISILIQUÆ seu CORNICULATÆ.

BUTOMUS umbellatus. *Lin. Spec. plant.* 532.

JUNCUS floridus major. *Bauhin. pin.* p. 12.

GLADIOLUS paluſtris Cordi *Gerard. emac.* 29.

Raii Synopſis ed. 3. 273. *Hudſon. Fl. Angl.* 152. *Scopoli Fl. Carn. ed.* 2. *p.* 283. *Halleri hiſt. pl. Helv. Vol.* 2. 81.

RADIX perennis, alba, tuberculoſa, tranſverſa, edulis? ex inferiore parte radiculas prælongas dimittens.

ROOT perennial, white, knobby, tranſverſe, eatable? from its under ſide ſending down a great number of very long fibres.

SCAPUS pedalis ad orgyalem, teres, glaber.

STALK round, ſmooth, from one to five or ſix feet high, according to its place of growth.

FOLIA triquetra, ſpongioſa, *fig.* 1. ſcapo breviora; ad baſin ſpathacea, apicibus compreſſis, tortuoſis.

LEAVES triangular, ſpongy, *fig.* 1. ſhorter than the ſtalk, at bottom ſheathy, at top flat, and twiſted.

FLORES in UMBELLA, ad triginta; pedunculi digitales, e vaginis membranaceis prodeuntes.

FLOWERS numerous, to thirty, each on a ſingle peduncle of about a finger's length, forming an UMBELL, ſurrounded at bottom by withered membranous ſheaths.

CALYX. INVOLUCRUM triphyllum, foliolis lanceolatis, marceſcentibus.

CALYX. An INVOLUCRUM of three leaves, ſpear ſhaped and withered.

COROLLA. PETALA ſex inæqualia, ſubrotunda, concava, roſea, *fig.* 2, alternis minoribus, acutioribus. *fig.* 3.

COROLLA. Compoſed of ſix PETALS, which are roundiſh, concave, and moſt commonly of a bright red; *fig.* 2. the three exterior ſmaller, and more pointed, *fig.* 3.

STAMINA. FILAMENTA novem, ſubulata, *fig.* 4, 5. ANTHERÆ inſidentes, dum pollinem involvunt oblongæ, rubræ, quadriſulcatæ, mucrone brevi terminatæ, *fig.* 6. 7, emiſſo polline ſubcordatæ, compreſſiæ, bilamelloſæ, *fig.* 4. POLLEN flaviſſimum.

STAMINA. Nine FILAMENTS tapering, *fig.* 4. 5. the ANTHERÆ ſitting on the filaments, before the ſhedding of the Pollen, oblong, reddiſh, having four grooves, and terminated by a ſhort point, *fig.* 6. 7. appearing afterwards ſomewhat heart ſhaped, flat, and as if compoſed of two lamellæ, *fig.* 4. the POLLEN is of a bright yellow colour.

PISTILLUM. GERMEN ſubtriangulare, latere exteriore latiore, convexo, *fig.* 9. 10. STYLI ſex ſubulati; *fig.* 8. STIGMA canaliculatum.

PISTILLUM. the GERMEN nearly triangular, the outer ſide broad and roundiſh, *fig.* 9. 10. ſix STYLES, tapering, the STIGMA has a ſmall channel in it, which afterwards ſpreads into two lips, *fig.* 11. 12.

PERICARPIUM. CAPSULÆ ſex, oblongæ, attenuatæ, erectæ, univalves, apice bilabiatæ, introrſum dehiſcentes, *fig.* 11. 12.

SEED-VESSEL. Six CAPSULES, oblong, tapering, upright, of one valve, opening inwards, *fig.* 11. 12.

SEMINA plurima, minuta, oblonga, fuſca, *fig.* 13.

SEEDS numerous, ſmall, oblong, brown, *fig.* 13.

WE find this ſtately Plant in, and by the ſides of our watery ditches flowering from *July* to *September*. A few years ſince it was found growing in *St. George's-Fields*, but the improvements making in that, and other parts adjacent to *London*, now oblige us to go farther in ſearch of this and many other curious Plants. About the Iſland of *St. Helena*, near *Deptford*, and the Marſhes by *Blackwall*, it is found in great abundance, although very ſcarce in many other parts of *Great-Britain*. Fiſh-ponds, or other pieces of water, would derive great beauty from the introduction of this elegant native of our Iſle, the handſome appearance of which did not eſcape our countryman, old GERARD, who deſcribes it thus: "This Water Gladiole, or Graſſy-Ruſh, of all others, is the faireſt and moſt pleaſant to behold, "and ſerveth very well for the decking and trimming up of houſes, becauſe of the beautie and braverie thereof."—— That accurate obſerver RAY deſcribes its nine STAMINA, although in his time they were not viewed in that conſequential light which they are in our preſent Syſtems of Botany. It is the only Plant of the claſs ENNEANDRIA which grows wild in this kingdom. If vegetables were claſſed according to their natural affinities, this would rank among the lillies. Cattle do not eat it. It is ſo hardy as to bear the cold of *Lapland*.

Butomus umbellatus.

Kilburn pinxt et sculpt

SAXIFRAGA GRANULATA. WHITE SAXIFRAGE.

SAXIFRAGA *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Calyx quinquepartitus. *Corolla* pentapetala. *Capſula* biroſtris, unilocularis, polyſperma.

Raii Syn. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAXIFRAGA *granulata* foliis caulinis reniformibus lobatis, caule ramoſo, radice granulata. *Linn. Syſt. Vegetab. p.* 344. *Fl. Suecic. n.* 372.

SAXIFRAGA foliis radicalibus reniformibus, obtuſe dentatis, caulinis palmatis. *Haller. hiſt. helv. n.* 976.

SAXIFRAGA rotundifolia alba. *Bauhin Pin.* 309.

SAXIFRAGA alba. *Gerard emac.* 841.

SAXIFRAGA alba vulgaris. *Parkinſon* 424. *Raii Syn.* 354. *Hudſon Fl. Angl. p.* 159. *Oeder. Flor. Dan.* 514.

RADIX. Fibris hujus radicis glomeratim adnaſcuntur plurimi bulbilli, extus rubeſcentes aut flaveſcentes, intus albidi, ſaporis primum adſtringentis, poſtea amari et ingrati.

CAULIS plerumque ſimplex, pedalis, ſubramoſus, teres, hirſutus, preſertim ad baſin, parum folioſus.

FOLIA *radicalia* petiolis longis, hirſutis, baſi latis inſidentia, reniformia, hirſutula, lobata, lobis obtuſis ; *caulina* ſicut adſcendunt petiolis brevioribus gaudent donec tandem ſeſſilia fiunt, lobi foliorum acutiora evadunt, apicibus rufeſcentibus.

CALYX : PERIANTHIUM quinquepartitum, hirſutulum, ſubviſcidum, laciniis ovato-acutis apice rufis, *fig.* 1.

COROLLA : PETALA quinque alba, patentia, apice rotundata, baſi anguſtiora et venis flaveſcentibus notata, *fig.* 2.

STAMINA : FILAMENTA decem ſubulata ; ANTHERÆ ovatæ, compreſſæ, inſidentes, flavæ, biloculares, quorum quinque Pollen primum emittunt, hinc longiores, *fig.* 3, 4.

PISTILLUM : GERMEN ſubrotundum, inferum, glandulâ ſaturate viridi cinctum, *fig.* 7 ; STYLI duo Staminibus breviores, incurvati, *fig.* 5 ; STIGMA concavum, *fig.* 5, demum expandens, *fig.* 6.

PERICARPIUM : CAPSULA ſubovata, biroſtris, bilocularis, pallide fuſca, *fig.* 8.

SEMINA numeroſa, minutiſſima, nigra. *fig.* 9.

ROOT. To the fibres of the root of this plant, adhere in cluſters a number of ſmall bulbs, externally red or yellowiſh, internally white, of a taſte at firſt aſtringent, afterwards bitter and diſagreeable.

STALK generally ſimple, about a foot high, a little branched, round, hirſute particularly at bottom, furniſhed with but few leaves.

LEAVES *which grows next the root* placed on long hairy foot-ſtalks with a broad baſe, kidney-ſhaped, ſlightly hairy, divided into obtuſe lobes, thoſe of the *ſtalk*, as they aſcend, are furniſhed with ſhorter foot-ſtalks, 'till they gradually become ſeſſile, the lobes more acute, and the tips of a reddiſh colour.

CALYX : a PERIANTHIUM divided into five ſegments, hirſute and ſomewhat viſcid, the laciniæ of an oval pointed ſhape, and red at the tips, *fig.* 1.

COROLLA : five PETALS, white, ſpreading, round at top, at bottom narrower, and ſtriped with yellow veins, *fig.* 2.

STAMINA : ten FILAMENTS tapering ; ANTHERÆ oval, flat, ſitting on the Filaments, yellow, bilocular, five of them ſhed the Pollen firſt, hence they become longer than the others, *fig.* 3, 4.

PISTILLUM : GERMEN roundiſh, placed below the Calyx, ſurrounded by a gland of a deep green colour, *fig.* 7 ; STYLES, two, ſhorter than the Stamina, bending inward, *fig.* 5 ; STIGMA hollow, *fig.* 5, finally expanding, *fig.* 6.

SEED-VESSEL : a CAPSULE of a ſhape ſomewhat oval, and pale brown colour, having two beaks or horns, and two cavities, *fig.* 8

SEEDS numerous, very minute, and black. *fig.* 9.

THE Root of this ſpecies of *Saxifrage*, by means of which it is chiefly propagated, affords the young Botaniſt a very good example of the *Radix granulata*, being compoſed of a number of little grains or bulbs, connected together in cluſters by the fibres ; ſome of theſe bulbs are ſolid and entire, not unaptly reſembling in ſhape the bulbs of Onions ; others ſpread open at top, and ſeem to be compoſed of a number of ſquamulæ or leſſer bulbs, theſe are often of a bright red colour : the upper part of the ſtalk, the foot-ſtalks of the flowers, and calyx, are covered with a kind of hairs, which terminate in a viſcid globule, and which ſeem to accompany moſt of the plants of this Genus. The two Styles, which at firſt are ſhort, with a hollow Stigma, *fig.* 5, quickly grow much longer ; the Stigmata ſpread open, ſo that they reſemble in ſome degree a pair of tea-tongs, *fig.* 6.

This plant does not occur ſo frequently with us as many others : according to Mr. HUDSON, it is common about *Wandſworth* ; I have frequently gathered it in the fields about *Peckham*, and lately have found it in great abundance much nearer town, viz. in the fields called *Lock-fields*, on the right hand ſide of *Kent-ſtreet Road*, at the back of, and contiguous to Mr. DRIVER's Nurſery Gardens : it delights to grow in dry paſtures which have a gravelly bottom, flowers in May, and produces its ſeeds in the month following. When double, it ſerves, with many other Britiſh plants, to ornament the gardens of the curious.

Like many other plants, this ſeems to owe what little importance it has in medicine to the doctrine of ſignatures, which has moſt unphiloſophically introduced a number of plants into our Materia Medica. As the root bore ſo great a reſemblance to little ſtones, it was concluded it muſt be efficacious in the ſtone and gravel, for which diſeaſes it has been recommended, but there are no accounts of its ſucceſs to be depended on. If it does poſſeſs any medical virtue, it ſhould appear from the taſte of the root to be that of an aſtringent.

Saxifraga Granulata.

Kilburn Pinx^t et sculp^t

SEDUM ALBUM. WHITE-FLOWERED STONECROP.

SEDUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5 fidus. *Cor.* 5-petala. *Squamæ* nectariferæ 5, ad baſin germinis. *Caps.* 5.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM *album* foliis oblongis obtuſis teretiuſculis ſeſſilibus patentibus, cyma ramoſa. *Linn. Syſt. Vegetab. p.* 359. *Sp. Pl. p.* 619. *Fl. Suecic.* 153.

SEDUM caule glabro, foliis teretibus; umbellis ramoſis; floribus petiolatis. *Haller hiſt. helv. n.* 959.

SEDUM *album. Scopoli Fl. Carn. p.* 324.

SEDUM minus teretifolium album. *Bauhin. p.* 283.

SEDUM minus officinarum. *Gerard emac.* 512.

VERMICULARIS ſive craſſula minor vulgaris. *Parkinſon* 734. *Raii Syn.* 271. *Hudſon Fl. Angl. p.* 171. *Oeder. Fl. Dan. Icon.* 66.

RADIX perennis, fibroſa.

CAULES flexuoſe ſuper muros repent, dein eriguntur, triunciales circiter, folioſi, rubri.

FOLIA ſeſſilia, oblonga et fere cylindracea, obtuſa, non admodum conferta, patentia, carnoſa, glabra, ſæpius rubicunda.

INFLORESCENTIA: Flores petiolati, in CYMAM ramoſam confertam diſpoſiti.

CALYX: PERIANTHIUM pentaphyllum, foliolis brevibus, obtuſis, *fig.* 1.

COROLLA: PETALA quinque alba, acuminata, lineâ longitudinali rubra ſæpius notata, *fig.* 2.

NECTARIUM glandula minima ſquamiformis ad baſin ſinguli Germinis. *fig.* 6.

STAMINA: FILAMENTA decem alba, *fig.* 2, 3; ANTHERÆ rubræ.

PISTILLUM: GERMINA quinque, in STYLOS totidem acuminatos deſinentia; STIGMATA ſimplicia, *fig.* 4, 5.

PERICARPIUM: CAPSULÆ quinque minimæ acuminatæ introrſum dehiſcentes, *fig.* 7.

SEMINA parva, oblonga, *fig.* 8.

ROOT perennial and fibrous.

STALKS creep on the walls in a crooked form, then grow upright, about three inches high, leafy, and red.

LEAVES ſeſſile, oblong and almoſt cylindrical, obtuſe, but thinly placed on the ſtalk, ſpreading, fleſhy, ſmooth, and generally of a reddiſh colour.

INFLORESCENCE: Flowers ſtanding on foot-ſtalks and diſpoſed in a thick branched CYMA.

CALYX: a PERIANTHIUM of five leaves, which are ſhort and obtuſe, *fig.* 1.

COROLLA: five white PETALS, acuminated and generally marked with a longitudinal red ſtreak, *fig.* 2.

NECTARY a very minute ſquamiform gland at the base of each of the Germina, *fig.* 6.

STAMINA: ten white FILAMENTS, *fig.* 2, 3; ANTHERÆ deep red.

PISTILLUM: five GERMINA, terminating in ſo many acuminated STYLES; the STIGMATA ſimple, *fig.* 4, 5.

SEED-VESSEL: five ſmall acuminated CAPSULES opening inwardly, *fig.* 7.

SEEDS ſmall and oblong, *fig.* 8.

The *Sedum album* may be conſidered with us as rather a ſcarce plant; it is found here and there on the Walls about Town, particularly on the Chapel-wall in *Kentiſh-Town*, where it has grown for many years; alſo upon a Wall on the left-hand ſide leading from *Bromley* to *Bromley-Hall*, in *Middleſex*. It has been thought to poſſeſs ſufficient beauty to recommend it as a garden plant, and is accordingly, with very little trouble, cultivated in many of the gardens of the curious, nothing more being neceſſary than placing it in a pot filled with gravel or mould: in ſuch a ſituation it will grow, flouriſh, and propagate itſelf very faſt.

It has been called *album* from the colour of its flowers, which generally however have a tinge of red in them. It flowers in July. The round and oblong ſhape of its leaves readily diſtinguiſhes it from our other *Stonecrops*.

HALLER informs us that it poſſeſſes all the virtues of the large *Houſeleek*, and that he has uſed the juice of it in uterine hæmorrhages, but does not inform us with what ſucceſs. By way of cataplaſm it is applied to the piles when in a painful ſtate, and is ſaid to have ſometimes been made the ſame uſe of in cancers with ſucceſs. By ſome it is eaten as a pickle.

Sedum Album.

SEDUM ACRE. COMMON YELLOW STONECROP, OR WALL-PEPPER.

SEDUM. *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Raii Synopſis Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM *acre* foliis ſubovatis, adnato-ſeſſilibus, gibbis, erectiuſculis, alternis; cyma trifida. *Lin. Syſt. Vegetab. p.* 359. *Fl. Suecic. p.* 153.

SEDUM foliis conicis confertis, caulibus ramoſis, ſummis trifidis. *Haller. hiſt. v.* 1. *n.* 966.

SEMPERVIVUM minus vermiculatum acre. *Bauhin. pin.* 283.

VERMICULARIS ſeu Illecebra minor acris. *Ger. emac.* 517.

ILLECEBRA minor ſeu Sedum tertium Dioſcoridis. *Parkinſon* 735. *Raii Synop.* 270. *Hudſon. Fl. Angl. p.* 171.

RADIX perennis, fibroſa.

CAULES numeroſi, cæſpitoſi, ramoſiſſimi, palmares, ad baſin repentes, dein erecti, teretes, folioſiſſimi.

FOLIA alterna, conferta, imbricata, ſuberecta, adnato-ſeſſilia, ovata, obtuſa, brevia, carnoſa, margine paululùm compreſſa, glabra, *ſapore acri. fig.* 1.

FLORES ſeſſiles, lutei, in Cymas ſubtrifidas diſpoſiti.

CALYX: PERIANTHIUM quinquepartitum, perſiſtens, laciniis craſſis obtuſiuſculis, *fig.* 2.

COROLLA: PETALA quinque lanceolato-acuminata, plana, patentia, Calyce duplo longiora, *fig.* 3.

NECTARIUM: Squamula minima, alba, ad baſin, ſinguli germinis extrorſum poſita, *fig.* 7.

STAMINA: FILAMENTA decem ſubulata, longitudine Corollæ. ANTHERÆ flavæ, *fig.* 4.

PISTILLUM: GERMINA quinque oblonga, flava, in STYLOS acuminatos deſinentia. STIGMATA ſimplicia, *fig.* 6.

PERICARPIUM: CAPSULÆ quinque patentes, acuminatæ, compreſſiæ, longitudinaliter ſuturâ introrſum dehiſcentes, *fig.* 8.

SEMINA minima, ovata, rufa, *fig.* 9.

ROOT perennial, and fibrous.

STALKS numerous, growing in tufts, very much branched, three inches high, creeping at their baſe, but afterwards growing upright, round, and very leafy.

LEAVES alternate, growing very thick together, and laying one over another, nearly upright, growing to the ſtalk, oval, blunt, ſhort, fleſhy, flattened a little at the edges, ſmooth, and of a *very biting taſte*, *fig.* 1.

FLOWERS ſeſſile, yellow, growing in Cymæ ſomewhat trifid.

CALYX: a PERIANTHIUM divided into five ſegments, and continuing, the ſegments thick and bluntiſh, *fig.* 2.

COROLLA: compoſed of five long-pointed PETALS which are flat, ſpreading, and twice the length of the Calyx, *fig.* 3.

NECTARY: a very minute ſcale or gland placed externally at the bottom of each Germen, *fig.* 7.

STAMINA: ten FILAMENTS, tapering, the length of the Corolla, the ANTHERÆ yellow, *fig.* 4.

PISTILLUM: five GERMINA, oblong, yellow, terminating in five long-pointed STYLES. The STIGMATA ſimple, *fig.* 6.

SEED-VESSEL: five CAPSULES, ſpreading, long-pointed, flat, opening internally by a longitudinal future, *fig.* 8.

SEEDS very minute, oval, and reddiſh brown, *fig.* 9.

According to the account which ſome medical Writers give of this Plant it appears to poſſeſs conſiderable virtues, while others, from the durability of its acrimony, and the violence of its operation, have thought it ſcarce ſafe to be adminiſtered. Chewed in the mouth it has a very hot and biting taſte, whence its name of *Wall-Pepper*. Applied to the ſkin it excoriates and exulcerates it, taken internally it proves emetic and diuretic.

The Diſeaſes in which it has been chiefly recommended are the Scurvy and Dropſy, in both of which, according to Linnæus, it is an excellent remedy; and ſome inſtances are brought of the efficacy of its juice in Cancers, but theſe perhaps, ſtand in need of farther confirmation.

It grows very common on Houſes, Walls, and gravelly Banks, and flowers in June; it continues but a ſhort time in bloſſom, but while it laſts its lively yellow colour gives a very pretty appearance to thoſe Houſes and Walls which are covered with it.

Sedum acre.

Lychnis Flos cuculi.

LYCHNIS FLOS CUCULI. MEADOW LYCHNIS.

LYCHNIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Raii Synopſis Gen. 24. HERBÆ PFNTAPETALÆ VASCULIFERÆ.

LYCHNIS *Flos Cuculi* petalis quadrifidis fructu ſubrotundo. *Lin. Syſt. Vegetab. p.* 361. *Sp. Pl.* 625.

LYCHNIS petalis quadrifidis. *Haller. hiſt. v.* 1. *n.* 921.

CARYOPYLLUS pratenſis, laciniato flore ſimplici, ſive Flos cuculi. *Bauhin. pin.* 210.

LYCHNIS plumaria ſylveſtris ſimplex. *Parkinſon. parad.* 253.

ARMERIUS pratenſis mas et fœmina. *Gerard. Emac.* 600.

Raii Synop. ed. 3. 338. *Hudſon. Fl. Angl.* 174. *Oeder. Flor. Dan. tab.* 590. *Scopoli. Fl. Carniol. ed.* 2. *p.* 311.

RADIX perennis, fibroſa, ex albido fuſca, ſaporis ſubacris.

CAULIS pedalis ad tripedalem, erectus, ſulcato-angulatus, articulatus, geniculi tumidi, ſcabriuſculus, purpuraſcens.

FOLIA Caulis, oppoſita, connata, lanceolata, carinata, ſuberecta, lævia.

PEDUNCULI oppoſiti, plerumque unico intermedio.

CALYX: PERIANTHIUM monophyllum, tubulatum quinquedentatum, decangulatum, purpureum, perſiſtens. *fig.* 1.

COROLLA PETALA quinque, unguis longitudine calycis, *fig.* 2. LIMBUS quadrifidus, laciniis exterioribus brevioribus, et anguſtioribus, *fig.* 4. ad baſin limbi laminæ duæ erectæ acutæ. *fig.* 3.

STAMINA: FILAMENTA decem, ſubulata, quorum quinque breviora, *fig.* 5, brevioribus ungui petalorum affixis. *fig.* 6. ANTHERÆ oblongæ, biloculares, *fig.* 7. incumbentes, purpuraſcentes.

PISTILLUM GERMEN ſubovatum, *fig.* 8. STYLI quinque ſubulati, ſubincurvati, *fig.* 10. STIGMATA ſimplicia. *fig.* 10.

PERICARPIUM CAPSULA ovata, unilocularis, *ore quinquedentato, dentibus reflexis. fig.* 9.

SEMINA numeroſa, ſubcompreſſa, ſcabriuſcula, ex cinereo-fuſca. *fig.* 11. 12.

ROOT perennial, fibrous, of a browniſh white colour, and ſomewhat biting taſte.

STALK from one to three feet high, upright, ſomewhat angular and grooved, jointed, the joints ſwelled, roughiſh, and of a purpliſh colour.

LEAVES of the Stalk oppoſite, connate, lanceolate, the midrib prominent underneath, upright and ſmooth.

PEDUNCLES oppoſite, one generally intermediate.

CALYX a PERIANTHIUM of one leaf, tubular, quinquedentate, having ten angles, or ridges, and of a deep purple colour.

COROLLA: five petals, the claw the length of the Calyx, *fig.* 2. the LIMB divided into four laciniæ, the exterior ſhorteſt and narroweſt, *fig.* 4. at the bottom of the limb are placed two ſmall upright laminæ, *fig.* 3.

STAMINA: ten FILAMENTS, tapering, five long and five ſhort, *fig.* 5. the ſhorter filaments affixed to the claw of each petal, *fig.* 6. the ANTHERÆ oblong, bilocular. *fig.* 7. laying acroſs the filaments, and of a purpliſh hue.

PISTILLUM: the GERMEN ſomewhat oval, *fig.* 8. five STYLES tapering and bending a little inward, *fig.* 10. STIGMATA ſimple. *fig.* 10.

SEED-VESSEL: a CAPSULE, oval, of one cavity, the *mouth having five teeth which turn back. fig.* 9.

SEEDS numerous, flattiſh, rough, and of a brown aſh colour. *fig.* 11. 12.

A variety of names hath been given to this Plant, as Meadow Pink, Cuckow Flower, Wild Williams, Ragged Robin, &c. Meadow Lychnis however ſeems to us the moſt eligible. It abounds in moiſt Meadows, where it flowers in May and June, and is included amongſt the great number of which our Meadow hay is compounded. Goats, Sheep, and Horſes are ſaid to feed on it. The uſe to which it is applied, ſeems to be chiefly ornamental; the beauty of its flowers juſtly entitles it (with many other neglected Britiſh Plants) to a place in the Gardens of the curious: where it is frequently found with a double flower, making a beautiful appearance, and requiring little more care in its culture, than to be placed in a moiſt ſituation: It may be propagated either by ſeeds or ſlips; the ſeeds may be found ripe in the latter end of June, by the ſides of ditches, where the Mower's Scythe has not reached them. We ſometimes find the Meadow Lychnis growing wild with a double flower, and ſometimes with a white one; but this is altogether accidental.

The agreement between the blowing of flowers, and the periodical return of birds of paſſage, has been attended to from the earlieſt ages: Before the return of the ſeaſons was exactly aſcertained by Aſtronomy, theſe obſervations were of great conſequence in pointing out ſtated times for the purpoſes of Agriculture; and ſtill, in many a Cottage, the birds of paſſage and their correſponding flowers aſſiſt in regulating

"The ſhort, and ſimple Annals of the Poor."

For this reaſon, no doubt, we have ſeveral other plants that, in different places, go by the name of Cuckow Flower. *Gerard* ſays, Cardamine pratenſis (Common Ladies Smock) is the true Cuckow Flower. *Shakeſpear's* Cuckow Buds are of "yellow hue." By ſome the Orchis, Arum, and Wood-ſorrel are all called after the Cuckow.

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Cerastium aquaticum.

Tilburn fecit

CERASTIUM AQUATICUM. MARSH CERASTIUM OR MOUSE-EAR CHICKWEED.

CERASTIUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Raii Synop. Gen: 24 HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *aquaticum* foliis cordatis, ſeſſilibus, floribus ſolitariis, fructibus pendulis. *Linnæi Syſt: Vegetab. p.* 363. *Fl. Suecic. p.* 157.

ALSINE foliis ovato-cordatis, imis petiolatis, tubis quinis. *Haller. hiſt. n.* 885.

STELLARIA aquatica. *Scopoli Fl. Carniol. p.* 320.

ALSINE aquatica major. *Bauhin. pin.* 254.

ALSINE major. *Gerard emac.* 611. maxima *Parkinſon* 759. *Raii Syn. p.* 347. *Hudſon Fl. Angl. p.* 177.

RADIX perennis, fibroſa, repens.

CAULES bipedales, debiles, pene teretes, teneri, filoſi, hirſuti, ramoſi, rami alterni.

FOLIA Caulis ſeſſilia, amplexicaulia, cordato-acuminata, margine in ſuperioribus preſertim undulata, lævia, ſubviſcida; ramorum magis undulata, petiolata.

PEDUNCULI alterni, e dichotomia caulis, uniflori, *poſt floreſcentiam penduli.*

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis lanceolatis, concavis, ſubcarinatis, apice obtuſiuſculis, hirſutis, margine membranaceis, petalis paulo brevioribus. *fig.* 1.

COROLLA: PETALA quinque alba, patentia, bipartita, laciniis oblongis, nervoſis, divaricantes, *fig.* 2. 3.

STAMINA: FILAMENTA decem, ſubulata, alba, receptaculo inſerta, ad baſin et inter petala alterne locata, *fig.* 4. quæ inter petala locantur paulo longiora ſunt et glandula ad baſin inſtruuntur *fig.* 5. ANTHERÆ inſidentes, biloculares, albæ, *fig.* 4.

PISTILLUM: GERMEN ſubrotundum, apice ſulcatum, STYLI quinque albi, filiformes, longitudine Germinis. STIGMATA ſimplicia, *fig.* 6.

PERICARPIUM: CAPSULA ovata, obſolete pentagona, ore quinquedentato. *fig.* 7.

SEMINA rufa, ſubreniformia, ſcabra, 60 numeravi, *fig.* 8. 9.

ROOT perennial, fibrous, and creeping.

STALKS about two feet in length, weak, almoſt round, tender, ſtringy, hirſute, and branched, the branches alternate.

LEAVES of the Stalk ſeſſile, embracing the Stalk, ſomewhat heart ſhaped and acuminate, the edge particularly in the upper ones waved, ſmooth, and ſomewhat viſcid; thoſe of the branches more waved with ſhort footſtalks.

FOOTSTALKS alternate, from the forking of the Stalk, uniflorous, *after the bloſſom is gone off pendulous.*

CALYX: a PRIANTHIUM of five leaves, perſiſting, the leaves lanceolate, concave, ſlightly keel-ſhaped, bluntiſh at top, hirſute, at the edge membranous, and a little ſhorter than the Petals, *fig.* 1.

COROLLA: five PETALS white, ſpreading, divided almoſt to the bottom, the laciniæ or ſegments oblong, nervous, and divaricating, *fig.* 2. 3.

STAMINA: ten FILAMENTS, tapering, white, fixed to the receptacle, placed alternately, one at the baſe and one betwixt each petal, *fig.* 4; thoſe placed between the petals are a little longer than the others, and furniſhed at bottom with a gland, *fig.* 5. ANTHERÆ white and bilocular, *fig.* 4.

PISTILLUM: GERMEN roundiſh, at top grooved, five STYLES thread-ſhaped, white, the length of the Germen. STIGMATA ſimple, *fig.* 6.

SEED-VESSEL: an oval CAPSULE, ſlightly pentangular, the mouth quinquedentate.

SEEDS reddiſh brown, rough, about 60 in each capſule, *fig.* 8. 9.

SOME of our modern and moſt celebrated ſyſtematic Botaniſts ſeem very much divided with reſpect to the Genus to which this Plant ſhould belong. HALLER makes it an *Alſine* or *Chickweed*; SCOPOLI a *Stellaria*, and LINNÆUS a *Ceraſtium*. We ſhall not pretend to decide who is moſt in the right, but only obſerve that its general habit or appearance, and the form of its ſeeds, might eaſily induce HALLER to conſider it as an *Alſine*; the ſhape of its petals, with the ſtructure of its ſeeds, would juſtify SCOPOLI in calling it a *Stellaria*, while the number of its ſtyles might lead LINNÆUS with propriety to place it among the *Ceraſtiums*. To us it appears to have the greateſt natural affinity with the *Alſine media* or common *Chickweed*; it is true LINNÆUS ranks that plant among thoſe which have *five* Stamina, yet it is frequeutly obſerved to have more, and the ſtructure of the flower evidently ſhows it to be formed for having *ten*, and thoſe flowers which have not that number may be conſidered as imperfect. The Seeds of theſe two plants are ſo ſimilar as ſcarcely to be diſtinguiſhed from each other, and their ſtalks are procumbent, tender, brittle, and ſtringy, indeed they frequently ſo much reſemble one another, as to oblige the young Botaniſt to have recourſe to the very different ſize of their flowers in order to diſcriminate them.

This Plant grows in moiſt places, on the banks of rivers and by ſtreams of water, it flowers in July and Auguſt.

SCOPOLI aſſerts that the plants of this kind afford excellent food for Kine.

Mouse-ear Chickweed

CERASTIUM VULGATUM. Marsh Cerastium, or

EUPHORBIA PEPLUS. SMALL GARDEN SPURGE.

EUPHORBIA *Linnæi Gen. Pl.* DODECANDRIA TRIGYNIA.
Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.
EUPHORBIA *(Peplus)* umbella trifida, dichotoma, involucellis ovatis, foliis integerrimis obovatis petiolatis. *Linn. Syſt. Vegetab. p.* 375. *Fl. Suecic. p.* 163.
TITHYMALUS foliis rotundis, ſtipulis floralibus cordatis, obtuſis, petalis argute corniculatis. *Haller. hiſt. vol.* 2. *p.* 9. *n.* 1049.
PEPLUS ſive Eſula rotunda. *Bauhin pin.* 292. *Parkinſon. Gerard. emac.* 503.
TITHYMALUS parvus annuus, foliis ſubrotundis non crenatis, Peplus dictus. *Raii Syn. p.* 313. *n.* 9: Petty Spurge. *Hudſon Fl. Angl. p.* 182.

RADIX annua, lignoſa, ſimplex, fibroſa, albida.
CAULIS, ſuberectus, dodrantalis, teres, glaber, ramoſus, baſi durior, tenuior, ſubruber, folioſus, lactifluus.

RAMI pauci, ſparſi, inferioribus longioribus oppoſitis.

UMBELLA trifida, dichotoma.
FOLIA obovata, petiolata, integerrima, ſparſa, obtuſiuscula, inferioribus ſubrotundis.

STIPULÆ *umbellæ* tres, ovato-acutæ, petiolis brevibus inſidentes, *umbellulæ* alterne oppoſitæ, ſeſſiles, cordato-ovatæ, inæquales, integerrimæ, baſi quâ tendit germen quaſi excavatæ.

CALYX ventricoſus, perſiſtens. *fig.* 1.
COROLLA nulla.
NECTARIA quatuor *bicorniculata*, *fig.* 2.
STAMINA plerumque duo, aut tria, viſibilia, exſerta: ANTHERÆ didymæ, ſubrotundæ, *fig.* 3.

PISTILLUM: GERMEN pedunculatum, nutans, triangulare, angulis longitudinaliter ſulcatis, *fig.* 4, 6: STIGMATA tria, apice bifida, *fig.* 5.

PERICARPIUM: CAPSULA tricocca, trilocularis, trivalvis, valvulis lævibus, et dum adhuc virides diſſilientibus, *fig.* 6.

SEMEN unicum in ſingulo loculamento, ovatum, canum, *alveolatum*, appendiculatum, *fig.* 7.

N. B. Omnes partes fructificationis lente augentur.

ROOT annual, woody, ſimple, fibrous and whitiſh.
STALK generally upright, about nine inches high, round, ſmooth, and branched; at bottom harder, more ſlender, and of a reddiſh colour, leafy and milky.
BRANCHES few, not growing in any regular order, the lower ones longeſt and oppoſite.
UMBEL firſt trifid, then dichotomous.
LEAVES ſomewhat oval, but narroweſt towards the baſe, having foot-ſtalks, entire at the edges, placed in no regular order, ſomewhat blunt, the lowermoſt leaves almoſt round.
STIPULÆ of the *large umbel* three in number, oval and pointed, placed on very ſhort foot-ſtalks: of the *ſmall umbel* alternately oppoſite, ſeſſile, of an heart-ſhaped-oval form, unequal, and entire, at bottom on that ſide to which the Germen tends as if cut away.
CALYX bellying out and continuing, *fig.* 1.
COROLLA wanting.
NECTARIES four, each having *two little horns*, *fig.* 2.
STAMINA ſeldom more than two or three, which are viſible, and placed without the Calyx: ANTHERÆ two on each filament joined together, of a roundiſh figure, *fig.* 3.
PISTILLUM: GERMEN placed on a foot-ſtalk, hanging down, triangular, the angles longitudinally grooved, *fig.* 4, 6: STIGMATA three, bifid at top, *fig.* 5.
SEED-VESSEL: a CAPSULE of three cavities, and three valves, the valves protuberant, ſmooth, and ſplitting with a kind of elaſticity even while they are of a green colour, *fig.* 6.
SEED one in each cavity, oval, grey, with *numerous depreſſions on its ſurface*, and a little white button at one end, *fig.* 7.
N. B. All the parts of fructification are magnified.

MANY of the Spurges conſiderably reſemble one another, and two of them that have this affinity, grow frequently together in Gardens, viz. the preſent Spurge, *Euphorbia Peplus*, and the Sun Spurge, *Euphorbia Helioſcopia*; they may be diſtinguiſhed however by the ſlighteſt attention. In the *Helioſcopia* the leaves are *notched* or *ſerrated* at the edges, in the *Peplus* they are *entire*, in the *Helioſcopia* the Petals or rather Nectaria are *round* and *entire*, in the *Peplus* each is furniſhed with *two little horns*, *fig.* 2; there are other marks of diſtinction but theſe are the moſt ſtriking.

This ſpecies grows in Gardens and other cultivated ground, and flowers in Autumn.

The milky fluid which it abounds with, is by ſome applied to Warts, which it is ſaid to deſtroy.

Moſt if not all the plants of this Genus contain in them this milky and gummy ſubſtance, which to the taſte is exceedingly acrid; and this lactifluous property, joined to the peculiarity of its parts of fructification, point out almoſt at firſt ſight this natural family of plants. But the botanic Student who would inveſtigate this ſpecies according to the principles of the Linnæan Syſtem, not having theſe characteriſtics to aſſiſt him, finds a conſiderable difficulty in learning even the *Claſs* to which it belongs, nor is it poſſible for him to aſcertain the Claſs by an examination of this or ſcarce any other Engliſh Spurge: the *Stamina* in the firſt place are very minute, it is ſeldom that more than *two* or *three* protrude beyond the Calyx, all the reſt lye concealed within it, they ſeldom amount to *twelve* in number, and even if they did amount to that exact number, their *minuteneſs* and the *milky juice* which flows from the diſſection, render the enumeration of them ſcarce practicable. The Student may however in a great degree ſurmount this difficulty, by an examination of ſome plant of this genus, which is larger in every reſpect, and the *Euphorbia Lathyris* improperly called the *Caper Tree*, (which is cultivated in many Gardens) will afford him a very good example, and tend to give him a clear idea of the flower and fruit of this ſingular genus of plants.

I would not be thought on account of this difficulty to inveigh againſt LINNÆUS's Syſtem, being ſenſible that difficulties occur, and muſt occur in all botanic arrangements, and inſtead of ſelecting faults inſeparable from every mode of claſſification, (which ſeems to have been a favourite amuſement of ſome Authors, and forms indeed the greateſt part of their writings) I would uſe every endeavour to make it more perfect.

It is too much the faſhion now, as well as formerly, for every Botaniſt as ſoon as he thinks he has ſome pretenſions to eminence, to ſet about the arduous taſk of framing a new Syſtem; he may by this means give the public ſome idea of his ſelf-conſequence, and be inrolled in the Catalogue of Syſtem-makers, but not one jot will he advance the ſcience of Botany. It is to be regretted that Botaniſts will not be contented with a Syſtem, a proof of whoſe ſuperiority is the almoſt general reception it has met with throughout Europe, and unite in their endeavours to render that Syſtem more compleat, by giving us an accurate account of the hiſtory of thoſe plants not already given, their virtues and uſes; this appears to me to be the true method of advancing this delightful Science, and making it uſefull to Mankind.

When one Syſtem of Botany is generally followed as is nearly the caſe at preſent, Botaniſts in different kingdoms perfectly underſtand each others language, but when each adopts a ſeperate one, (which is frequently dictated by Pride or Caprice) all becomes Babel; and every one who wiſhes to acquire a knowledge of the plants treated of, muſt at conſiderable expence both of time and labour, acquire firſt the Authors new-created Syſtem-language, a tax which it is hoped every true Botaniſt will unite to oppoſe.

Euphorbia Peplus

Kilburn pinxit et fecit

EUPHORBIA HELIOSCOPIA. SUN SPURGE OR WART-WORT.

EUPHORBIA *Linnæi Gen. Pl.* DODECANDRIA TRIGYNIA.

Cor. 4-ſ. 5-petala, calyci inſidens. *Cal.* 1-phyllus, ventricoſus.

Capſ. 3-cocca.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

EUPHORBIA umbella quinquefida : trifida : dichotoma, involucellis obovatis, foliis cuneiformibus ſerratis. *Linn. Syſt. Vegetab. p.* 377. *Sp. Plant.* 658. *Fl. Suecic. p.* 162.

TITHYMALUS foliis petiolatis, ſubrotundis, ſerratis, ſtipulis rotundis, ſerratis. *Haller hiſt. v.* 2. *p.* 10. *n.* 1050.

TITHYMALUS *helioſcopius. Scopoli Fl. Carniol. p.* 337. *n.* 579.

TITHYMALUS *helioſcopius. Bauhin Pin.* 291. *Gerard emac.* 458. *Parkinſon.* 189.

TITHYMALUS *helioſcopius* ſive ſoliſequus. *I. B.* 3. 669. *Raii Syn.* 313. *Hudſon Fl. Angl. p.* 183.

RADIX ſimplex, fibroſa, annua.

CAULIS erectus, teres, piloſus, inferne brachiatus, brachiis oppoſitis.

FOLIA ſparſa, pauca, glabra, *ſerrata*, cuneiformia, inferiora petiolata, ſuperiora ſeſſilia.

UMBELLA quinquefida, trifida, dichotoma, patens, faſtigiata.

STIPULÆ minute ſerratæ, glabræ, UMBELLÆ quinque, obovatæ, horizontales, æquales, *Umbellulæ* tres, ovatæ, inæquales, interiore duplo minore, quæ ſequuntur mucrone terminatæ.

CALYX ſubventricoſus, flaveſcens, *fig.* 1.

COROLLA nulla.

NECTARIA quatuor, ſubrotunda, nuda, *fig.* 2.

STAMINA : FILAMENTA duo, tria, aut plura, viſibilia, exſerta ; ANTHERÆ flavæ, biloculares, loculis ſubrotundis, *fig.* 3.

PISTILLUM : GERMEN pedunculatum, ſubrotundum, nutans ; STIGMATA tria, apice bifida, *fig.* 4, 5.

PERICARPIUM : CAPSULA tricocca, trilocularis, trivalvis, *fig.* 6.

SEMEN unicum in ſingulo loculamento, ovatum, rugoſum ex purpureo fuſcum, *fig.* 7.

ROOT ſimple, fibrous, annual.

STALK upright, round, ſlightly hairy, below branched, the branches oppoſite.

LEAVES growing in no regular order, few, ſmooth, *ſerrated*, and wedge-ſhaped, the lower ones ſtanding on foot-ſtalks, the upper ones ſeſſile.

UMBELL dividing into five, next three, then two, ſpreading, of an equal height at top.

STIPULÆ minutely ſerrated and ſmooth, thoſe of the UMBELL five, ſomewhat oval, ſpreading horizontally, and equal ; thoſe of the *ſmaller* UMBELL three, oval, unequal, the interior one twice as ſmall as the others ; thoſe which follow terminating in a point.

CALYX ſomewhat ſwelled, of a yellowiſh colour, *fig.* 1.

COROLLA wanting.

NECTARIA four, roundiſh and naked, *fig.* 2.

STAMINA : two, three, or more FILAMENTS, viſible beyond the Calyx ; ANTHERÆ yellow, biloculars, the cavities containing the Pollen roundiſh, *fig.* 3.

PISTILLUM : GERMEN placed on a foot-ſtalk, roundiſh, hanging down ; STIGMATA three, biſid at top, *fig.* 4, 5.

SEED-VESSEL a CAPSULE of three protuberating valves, and three cavities, *fig.* 6.

SEEDS one in each cavity, oval, wrinkled, of a purpliſh brown colour, *fig.* 7.

IN ſpeaking of the *Euphorbia Peplus*, I had occaſion to take notice of the difficulty which Students in Botany find in inveſtigating the *Claſs* and *Order* of this Genus, and endeavoured to make it eaſier to them : in this plant the parts of the fructification are ſomewhat larger ; and it differs from the other Spurges in having its leaves finely ſerrated. In its acrimonious quality it is inferior to none ; hence it has often been applied to Warts for the purpoſe of deſtroying them ; but even in this caſe, great care ſhould be uſed in its application. My friend Mr. WILLIAM WAVELL lately informed me of a caſe which fell under his notice in the Iſle of Wight, where from the application of the juice of this Spurge to ſome Warts near the eye of a little girl, the whole face became inflamed to a very great degree.

It is very common in gardens and cultivated ground, flowering in Autumn.

Euphorbia Helioscopia L.

POTENTILLA REPTANS. COMMON CINQUEFOIL OR FIVE LEAVED GRASS.

POTENTILLA *Linnæi Gen. Pl.* ICOSANDRIA POLYGYNIA:

Raii Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

POTENTILLA *reptans* foliis quinatis, caule repente, pedunculis unifloris. *Lin: Syſt. Vegetab. p.* 398. *Fl. Suecic. p.* 178.

FRAGARIA foliis quinatis ſerratis, petiolis unifloris, caule reptante. *Haller hiſt. v. 2. p.* 47.

QUINQUEFOLIUM majus repens. *Bauhin pin. p.* 325. *Gerard emac.* 987.

PENTAPHYLLUM vulgatiſſimum *Parkinſon* 398. *Raii Syn. p.* 255.

POTENTILLA *reptans. Hudſon. Fl. Angl. p.* 197. *Scopoli Fl. Carniol. p.* 361

RADIX perennis, fuſiformis, paucis fibrillis inſtructa, intra terram profunde penetrans, craſſitie digiti minimi aut pollicis etiam in annoſis, externe ſordide caſtanea.

ROOT perennial, tapering, furniſhed with few fibres, penetrating deeply into the earth, the ſize of the little finger, or even of the thumb when old, externally of a dark cheſnut colour.

CAULES numeroſi, teretes, glabri, repentes, purpurei.

STALKS numerous, round, ſmooth, and creeping.

FOLIA quinata, etiam ſeptena occurrunt, ſerrata, venoſa, inæqualia, parum hirſuta, petiolis longis inſidentia, per paria e geniculis caulium ad magna intervalla prodeuntia.

LEAVES quinate, or growing five together, ſometimes even ſeven, ſerrated, veiny, unequal in their ſize, ſlightly hairy, ſitting on long footſtalks, which proceed in pairs from the joints of the ſtalks at conſiderable diſtances.

STIPULÆ geminæ, trifoliatæ, foliolis ovatis.

STIPULÆ growing in pairs, compoſed of three oval-ſhaped leaves.

PETIOLI uniflori, longi, ſuberecti.

FOOT-STALKS of the flowers uniflorous, long, and nearly upright.

CALYX: PERIANTHIUM monophyllum, planiuſculum, decemfidum, laciniis alternis minoribus, ſæpe reflexis, *fig.* 3, 4, 5.

CALYX: a PERIANTHIUM of one leaf, flattiſh, divided into ten ſegments, the ſegments alternately ſmaller and frequently turned back, *fig.* 3. 4. 5.

COROLLA: PETALA quinque, ſubrotundo-cordata, flava, unguibus calyci inſerta, *fig.* 6.

COROLLA: five PETALS of a roundiſh heart-ſhaped figure, and yellow colour, inſerted into the Calyx by their Ungues or claws, *fig.* 6.

STAMINA: FILAMENTA viginti, ſubulata, Corolla breviora, margini interiori glanduloſæ calycis inſerta, in duas ſeries diſtributa; ANTHERÆ oblongæ, compreſſiæ, flavæ, biloculares, loculæ membranâ diviſæ, inſidentes, *fig.* 7, 8.

STAMINA twenty FILAMENTS tapering: ſhorter than the Corolla, inſerted into the inner edge of the Calyx, which puts on a glandular appearance, and placed in two rows; ANTHERÆ oblong, flat, bilocular, the bags or cavities divided by a membrane, ſitting on the filaments, *fig.* 7, 8.

PISTILLUM: GERMINA numeroſa, in capitulum collecta; STYLI filiformes filamentis breviores, lateri Germinis inſerti, perſiſtentes; STIGMATA minima, obtuſa, *fig.* 9, 10.

PISTILLUM: the GERMINA numerous, collected into a little head; the STYLES filiform, ſhorter than the filaments, inſerted into the ſide of the Germen and continuing; the STIGMATA very ſmall and blunt, *fig.* 9, 10.

SEMINA numeroſa, parva, fuſca, ſtylo perſiſtente terminata, *fig.* 11, 12.

SEEDS numerous, ſmall, brown and terminated by the Style, *fig.* 11, 12.

The Roots of *Cinquefoil* and many other plants of the Claſs *Icoſandria*, poſſeſs conſiderable virtues as aſtringent medicines, and may be uſed in the ſame Caſes in which *Biſtort* is recommended.

It has likewiſe been uſed in ſome places for the purpoſe of tanning Leather where better materials for that purpoſe are with difficulty acquired.

A Tea or infuſion of the leaves is in uſe among the Country People as a drink in Fevers.

Moſt ſorts of Cattle are fond of the leaves, but it does not appear to be a plant worth cultivating on that account.

The Larva or Caterpillar of the *Phalæna Rubi*, *vid. Roeſel*, *Suppl. tab.* 69, *Albin tab.* 81, feeds on the leaves in Autumn, although a plant to which that Inſect is by no means confined.

It grows very common in meadows and on banks by the road ſides, and flowers in July, Auguſt, and September.

It affords the botanic Student a very good example of the *Caulis repens* or *Creeping Stalk.*

Potentilla reptans

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Hilbrom junr et sculpt

Ranunculus bulbosus.

RANUNCULUS BULBOSUS. ROUND-ROOTED OR BULBOUS CROWFOOT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Raii Syn: Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *bulboſus*, calycibus retroflexis, pedunculis ſulcatis, caule erecto multifloro, foliis compoſitis. *Linnæi Syſt. Vegetab. p.* 430. *Sp. Pl.* 778. *Fl. Suecic.* 196.

RANUNCULUS radice ſubgloboſa, foliis hirſutis, ſemitrilobis, lobis petiolatis acute ſerratis. *Haller. hiſt. v. 2. p.* 74.

RANUNCULUS *Scopoli Fl. Carn. v.* 1. *p.* 400. DIAGN. Radix globoſa. Calyces reflexi. Squamula nectarifera obtuſe trigona.

RANUNCULUS pratenſis radice verticilli modo rotunda. *Bauhin. pin.* 179. *Fuſchii Icon.* 160. *Gerard. emac.* 953. *Parkinſon* 329. *Raii Synop.* 247. *Hudſon Fl. Angl.* 211. *Fl. Dan. Icon.* 551.

RADIX perennis, *ſubrotunda*, albida, ſolida, ſuperne et inferne depreſſior, hinc radicem Rapæ quodammodo referens.

CAULIS pedalis, teres, *erectus*, fiſtuloſus, hirſutus, ramoſus.

FOLIA *radicalia* petiolis longis, hirſutis, baſi vaginantibus inſidentia, ſubprocumbentia, hirſuta, venoſa, trilobata, lobo medio majori et longius petiolato, ſemitrifido, ſegmentis acute inciſis; lobis lateralibus trifidis, ſegmentis inferioribus profundius diviſis; caulina ſubſeſſilia in lacinias plures tenuiores diviſa.

PEDUNCULI *ſulcati.*

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, *reflexis*,, piloſis, apice obtuſiuſculis, margine membranaceis, baſi *ſubpellucidis*, *fig.* 1.

COROLLA PETALA quinque obcordata, flava, nitentia, *fig.* 2.

NECTARIUM: ſquamula flava ſubemarginata ad baſin petali *fig.* 3.

STAMINA: FILAMENTA plurima, receptaculo inſerta; ANTHERÆ oblongæ, flavæ, ſubincurvatæ, *fig* 4.

PISTILLUM: GERMINA numeroſa in capitulum collecta; STYLI nulli; STIGMATA minima reflexa, *fig.* 5.

SEMINA plurima compreſſa, fuſca, mucronata, lævia, arillata, *fig.* 6.

Fig. 7, ARILLUS, *fig.* 8, ſemen denudatum.

ROOT perennial, *roundiſh*, white and ſolid, flattened a little both at top and bottom, hence ſomewhat reſembling a Turnep.

STALK a foot high, round, *upright*, hollow, hairy and branched.

LEAVES: the *radical* leaves placed on long hairy foot-ſtalks, which at bottom embrace the ſtalk, ſomewhat procumbent, hairy, veiny, and divided into three lobes; the mid-lobe largeſt and placed on a longer foot-ſtalk than the others, divided half way down into three ſegments which are ſharply cut in; the ſide-lobes trifid, the lower ſegments more deeply divided than the others; the leaves of *the ſtalk* nearly ſeſſile, deeply divided into numerous and narrower ſegments.

FOOT-STALKS of the flowers *grooved.*

CALYX: a PERIANTHIUM of five leaves, the leaves oval, hollow, *turned back* and hairy, bluntiſh at top, membranous at the edges, *thin and ſomewhat tranſparent* at bottom, *fig.* 1.

COROLLA: five PETALS, heart-ſhaped, yellow, and ſhining, *fig.* 2.

NECTARY: a ſmall yellow ſcale at the bottom of the petal, with a ſlight indentation at top, *fig.* 3.

STAMINA; FILAMENTS numerous and inſerted into the receptacle; ANTHERÆ oblong, yellow, and bending a little inwards, *fig.* 4.

PISTILLUM: GERMINA numerous, collected into a little head; STYLES none; STIGMATA very ſmall and bending back, *fig.* 5.

SEEDS numerous, flat, brown, ſmooth, pointed, and covered with an Arillus, *fig.* 6.

Fig. 7, the ARILLUS, *fig.* 8. the ſeed taken out of it.

THIS *Crowfoot* has been conſidered by ſome Authors as the ſame Species with the *Ranunculus repens*, but certainly without any propriety, for there can be no doubt but they are as diſtinct as any two ſpecies of *Ranunculus* whatever. It is diſtinguiſhed from the *repens* by ſeveral peculiarities, the principal of which are, 1ſt, its *reflexed calyx*, the turning back of which does not depend on any accidental circumſtances, but ſolely on its particular ſtructure; if it be plucked off, and held up to the light, the lower half of it will appear thin and almoſt tranſparent, hence not having a ſufficient degree of ſolidity to ſupport itſelf upright, it is reflected downwards;—2dly, the root in this ſpecies is *round*, and *ſolid*; in the *repens* it is *fibrous*: and 3dly, (which perhaps may be conſidered as the moſt eſſential difference) the ſtalk of the *bulboſus* is never known to *throw out any Stolones or Creepers*, which the *repens* always does in every ſoil and ſituation

This Species blows earlier than either the upright or creeping Crowfoot, and is the ſecond flower, which next to the Dandelion covers our meadows and paſtures with that delightful yellow, which almoſt dazzles the eye of the beholder.

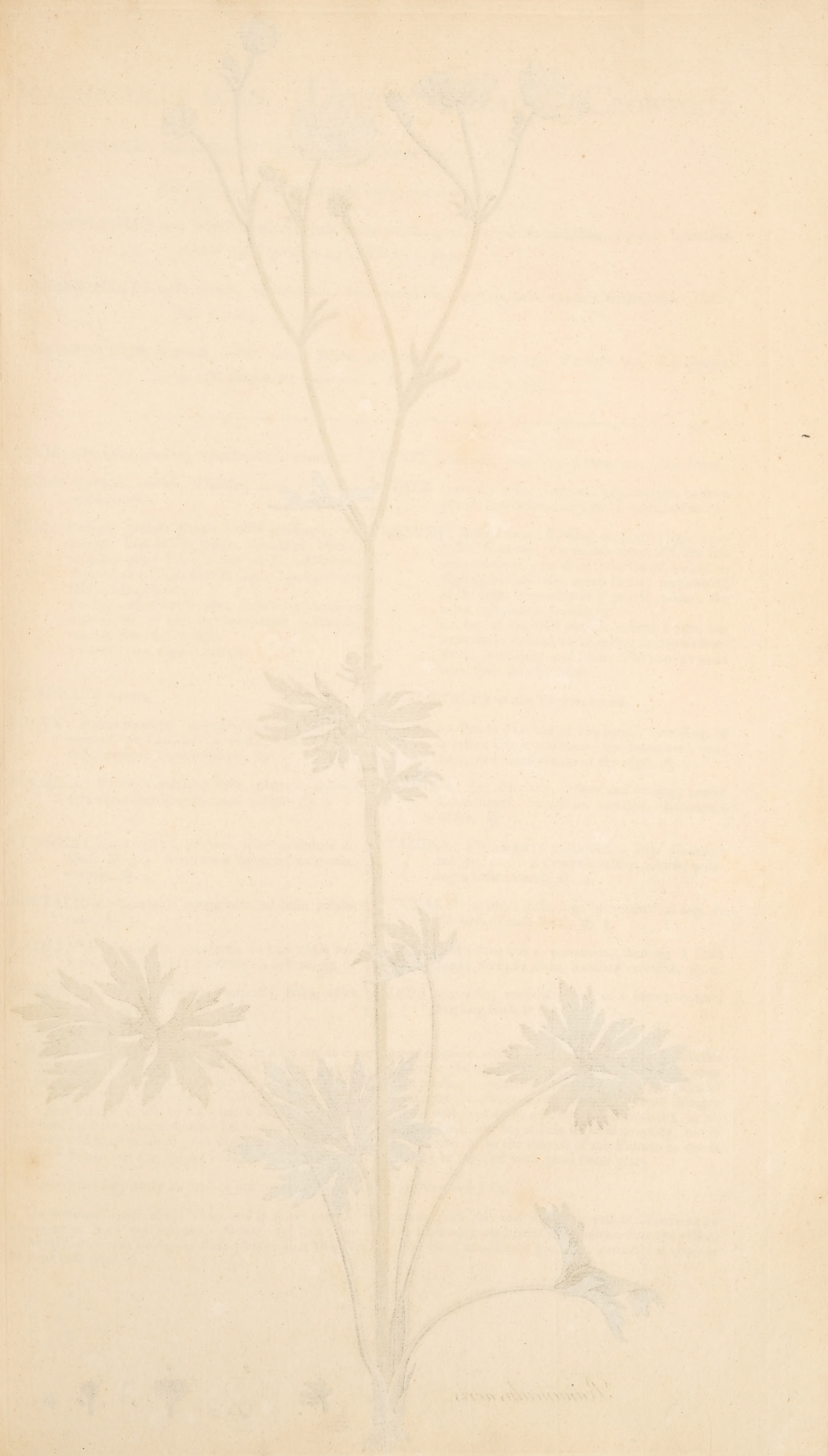
Like the reſt of the Crowfoots it poſſeſſes the property of inflaming and bliſtering the ſkin, but more particularly the Root, which is ſaid to raiſe bliſters with leſs pain and more ſafety, than Spaniſh flies; and hence where Bliſters have been thought neceſſary, theſe roots have been applied for that purpoſe, particularly to the Joints in caſes of the Gout. On being kept they looſe their ſtimulating quality, and are even eatable when boiled.

HOFFMAN informs us that Beggars make uſe of them to bliſter their ſkins in order to excite compaſſion.

The Juice of this herb is ſaid to be more acrid than that of the *Ranunculus ſceleratus*, and if applyed to the noſtrils it provokes ſneezing.

Hogs are fond of the roots and will frequently dig them up.

It abounds in dry paſtures, and flowers in May; it is cultivated when double as well as the upright meadow Crowfoot, which laſt occurs in almoſt every Garden, under the name of *Yellow Batchelors Buttons.*



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Ranunculus acris.

RANUNCULUS ACRIS. UPRIGHT MEADOW CROWFOOT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Raii Gen. 15. HERBÆ SEMINE NUDO, POLYSPERMÆ.

RANUNCULUS *acris* calycibus patulis, pedunculis teretibus, foliis tripartito-multifidis, ſummis linearibus. *Linnæi Syſt. Vegetab. p.* 430. *Fl. Suecic. p.* 196.

RANUNCULUS foliis hirſutis, ſemitrilobatis, lobis lateralibus bipartitis, foliis caulinis ſemitrilobis. *Haller. hiſt. n.* 1169.

RANUNCULUS pratenſis erectus acris. *Bauhin. pin.* 178. *Gerard. emac.* 951. *Parkinſon* 329. *Raii Synopſis, p.* 248. *Hudſon. Fl. Angl. p.* 211. *Scopoli. Fl. Carniol. p.* 398.

RADIX perennis, e pluribus radiculis albidis conſtans.

CAULIS bipedalis, erectus, fiſtuloſus, teres, ſubpiloſus, apice ramoſus.

FOLIA *Radicalia* petiolis longis erectis inſidentia, tripartita, lobo medio trifido, lateralibus bilobis, omnibus acute dentatis aut inciſis, ſubhirſutis, ſupernè ad baſin præſertim ſæpe purpureis, venis ſubtus extantibus.
Caulina radicalibus ſimilia, in lacinias tenuiores vero diviſa et petiolis brevioribus inſidentia, tandem linearia, ſeſſilia.
PETIOLI cum vaginis hirſuti.

PEDUNCULI teretes.

CALYX: PERIANTHIUM pentaphyllum, patens, flaveſcens, piloſum, foliolis ovatis, concavis, obtuſis, margine membranaceis, *fig.* 1.

COROLLA: PETALA quinque flava, nitentia, ſubcordata nunc emarginata, nunc integra, *fig.* 2.

STAMINA: FILAMENTA plurima, apice paululum dilatata, *fig.* 5. 4. ANTHERÆ flavæ, ſubincurvatæ, obtuſæ, *fig.* 4.

NECTARIUM: ſquamula emarginata, ad baſin petalorum, *fig.* 3.

PISTILLUM: GERMINA numeroſa, in capitulum collecta, STYLI nulli; STIGMATA reflexa, *fig.* 6.

SEMINA: plurima, ſubrotunda, compreſſa, fuſca, apice reflexa. *fig.* 7.

ROOT perennial, conſiſting of numerous white fibres.

STALK generally about two feet high, upright, hollow, round, ſomewhat hairy, much branched at top.

LEAVES: *Radical* leaves ſtanding on long upright footſtalks, tripartite, the middle lobe trifid, the ſide ones bilobous, and all of them ſharply indented, ſlightly hirſute, the upper ſurface particularly at the baſe frequently of a purple colour, the veins underneath prominent
Leaves of the *Stalk* like the radical leaves, but more finely divided, and ſtanding on ſhorter footſtalks, at top linear and ſeſſile. The FOOTSTALKS with their ſheaths hairy.

FOOT-STALKS of the Flowers round.

CALYX: a PERIANTHIUM of five leaves, ſpreading, of a yellow colour and hairy, the leaves oval, concave, and membranous at the edges, *fig.* 1.

COROLLA: five PETALS, yellow and ſhining, nearly heart-ſhaped, ſometimes notched, ſometimes entire, *fig.* 2.

STAMINA: FILAMENTS numerous, a little dilated at top, *fig.* 5. 4. ANTHERÆ yellow, obtuſe, bending a little inward, *fig.* 4.

NECTARY: a ſmall ſcale, ſlightly notched at top, at the baſe of each Petal, *fig.* 3.

PISTILLUM: GERMINA numerous, forming a little head; STYLES none, STIGMATA reflex, *fig.* 6.

SEEDS numerous, roundiſh, flat, of a brown colour, bending back at the tip, *fig.* 7.

Moſt of the Ranunculi or Crowfoots are acrid and in ſome degree poiſonous, and the ſpecies above deſcribed poſſeſſes this property in a very conſiderable degree; hence Linnæus has given it the name of *acris*; even pulling up the plant and carrying it to ſome little diſtance we have known ſufficient to produce a conſiderable inflamation in the palm of of the perſon's hand who held it. Cattle in general will not eat it, yet ſometimes when they are turned hungry into a new field of Graſs, or have but a ſmall ſpot to range in they will feed on it, and hence their mouths, as we have been credibly informed, have become ſore and bliſtered. When made into hay it loſes its acrid property, but is too ſtalky and hard to afford good Nouriſhment. It ſhould ſeem therefore to be the intereſt of the Farmer as much as poſſible to root out this ſpecies from his Meadows that its place may be ſupplied with good ſweet graſs.

It grows too frequently in moſt of our meadows, and flowers in June and July.

The common people about Town and in many parts of the country call this and the other yellow Crowfoots by the names of *Butter-cups* and *Butter-flowers*, and this name ſeems to have originated from a ſuppoſition that the yellow colour of butter was owing to theſe plants; that this ſhould be the caſe ſeems ſcarce probable, certainly it receives no good taſte from it.

CALTHA PALUSTRIS. MARSH-MARIGOLD.

CALTHA *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA *Cal.* o. Petala quinque. Nectaria o. *Capſulæ* plures polyſpermæ.

Raii Syn. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

CALTHA paluſtris. *Linnæi Syſt. Vegetab. p.* 432. *Flor. Suecic.* 198.

CALTHA *Haller. hiſt. helv. p.* 32. *n.* 1188.

POPULAGO *paluſtris. Scopoli Fl. Carniol p.* 404.

CALTHA paluſtris flore ſimplici. *Bauhin pin* 276.

POPULAGO. *Tournefort. Tabernamont.*

CALTHA paluſtris vulgaris ſimplex. *Parkinſon* 1213.

CALTHA paluſtris major. *Gerard. emac.* 817.

*Raii Syn.*272. Marſh Marigold. *Hudſon Fl. Angl. p.* 214.

RADIX perennis, e plurimis fibris, teretibus, majuſculis, albidis, conſtans.

CAULES ex eadem radice naſcuntur plures, ſuberecti, pedales, fiſtuloſi, pene teretes, glabri, ramoſi, ad baſin purpurei.

FOLIA *radicalia* petiolata, cordato-reniformia, glabra, crenata, *caulina* ſubſeſſilia, ad apicem acutiora, et acute crenata.

STIPULÆ fuſcæ, membranaceæ, marceſcentes.

RAMI dichotomi.

PEDUNCULI uniflori, erecti, ſulcati.

CALYX nullus.

COROLLA: PETALA plerumque quinque, flava, magna, ſubrotundo-ovata, plana, patentia, ſuperne non ſplendentia, *fig.* 1.

STAMINA: FILAMENTA numeroſa, filiformia, Corollâ breviora, ANTHERÆ oblongæ, compreſſæ, incurvatæ, flavæ, *fig.* 2.

PISTILLUM: GERMINA quinque ad decem, oblonga, compreſſa, erecta; STYLI nulli; STIGMATA ſimplicia, *fig.* 3.

PERICARPIUM: CAPSULÆ totidem, acuminatæ, patentes, ſuturâ ſuperiore dehiſcentes, *fig.* 4.

SEMINA plurima, ſubovata, pulchra, inferne olivacea, ſuperne rufa, *fig.* 5.

ROOT perennial, conſiſting of numerous, round, large, white fibres.

STALKS: ſeveral ariſe from the ſame root, almoſt upright, about a foot high, hollow, nearly round, ſmooth, branched, and purple at bottom.

LEAVES: the *radical* leaves placed on long foot ſtalks, betwixt an heart and kidney ſhape, ſmooth, ſhining, and notched or crenated; the leaves of the STALK nearly ſeſſile, more pointed at top, and ſharply crenated.

STIPULÆ brown, membranous and withered.

BRANCHES dichotomous.

PEDUNCLES ſupporting one flower, upright, and grooved.

CALYX wanting.

COROLLA generally conſiſts of five large PETALS of a roundiſh oval ſhape and yellow colour, flat, ſpreading, and without any gloſs on the upper ſide, *fig*, 1.

STAMINA: FILAMENTS numerous, filiform, ſhorter than the Corolla; ANTHERÆ oblong, flat, bending inward, and of a yellow colour, *fig.* 2.

PISTILLUM: GERMINA from five to ten, oblong, flattiſh, and upright; STYLES none; STIGMATA ſimple, *fig.* 3.

SEED-VESSEL: ſo many CAPSULES as Germina, pointed, and ſpreading, opening at the ſuperior ſuture, *fig.* 4.

SEEDS numerous, ſomewhat oval, beautifull, at bottom of an olive, and at top of a reddiſh colour.

LINNÆUS informs us that the *Caltha* is the firſt flower which proclaims the Spring in *Lapland*, and that it begins to blow about the end of May, with us it uſually flowers in March and April, and laſt Spring, 1775, this plant was found in Bloſſom in the month of February, ſo remarkably forward was the Spring of that year.

It grows in wet Meadows and by the ſides of Rivers, where it makes a very noble appearance, and when double, is often cultivated in Gardens, where it will grow very readily if the ſoil be favourable.

In the Country, Children collect it to ornament their Garlands on May day.

I ſcarce ever obſerved the leaves to be eaten by any animals, but the flowers are often deſtroyed by a ſpecies of CHRYSOMELA.

HALLER ſays that it is acrid and cauſtic and yet that it is eaten by Cows.

The flower Buds are pickled and uſed as Capers.

Verbena Officinalis

VERBENA OFFICINALIS. VERVAIN.

VERBENA *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.
Raii Gen. 14. SUFFRUTICES, ET HERBÆ VERTICILLATÆ.
VERBENA *officinalis*, tetrandra, ſpicis filiformibus, paniculatis; foliis multifido-laciniatis, caule ſolitario. *Lin. Syſt. Vegetab. p.* 62.
VERBENA foliis tripartitis rugoſis, ſpicis nudis graciliſſimis *Haller. hiſt. v.* 1. *p.* 96.
VERBENA communis cæruleo flore. *Bauhin, Pin.* 269. mas, ſeu recta et vulgaris. *Parkinſon* 674. communis *Gerard* 664. *Raii Syn.* 236. *Hudſon Fl. Angl. p.* 505. *Scopoli Fl. Carniol. p.* 433.

RADIX perennis, lignoſa, craſſitie digiti minimi, raro major, in terram profunde penetrans, fibroſa, luteſcens, ſapore ſubamaro.

CAULES plerumque plures ex eadem radice, erecti, pedales aut bipedales, quadrangulares, duo latera excavata, duo ſubconvexa, ſulcata, idque alterne, aculeis brevibus armati, brachiati.

FOLIA oppoſita, ſeſſilia, venoſa, profunde dentata, aut inciſa, ad baſin anguſtiora.

FLORES in ſpicas longas, filiformes, erectas diſpoſiti, BRACTEA ovato-lanceolata, acuminata, calyce breviore ſuffulti, *fig.* 11.

CALYX: PERIANTHIUM monophyllum, angulatum, quinquedentatum, *denticulo quinto minimo*, perſiſtens, *fig.* 1 2, 3.

COROLLA monopetala, inæqualis, purpuraſcens, TUBUS cylindraceus, incurvatus; FAUX villoſa, *fig.* 5; LIMBUS quinquefidus, *laciniis* rotundatis, ſubæqualibus, *fig.* 4.

STAMINA: FILAMENTA quatuor breviſſima, vix conſpicua, ANTHERÆ quatuor, quarum duæ breviores reliquis, ejuſdem formæ cum Didynamiis *fig.* 6.

PISTILLUM: GERMEN tetragonum, STYLUS filiformis apice paululum incraſſatus; STIGMA obtuſum *fig.* 7

PERICARPIUM nullum, Calyx continens Semina.

SEMINA quatuor, oblonga, obtuſa, interne planiuſcula *alba*, externe fuſca, convexa, *ſulcato-reticulata fig.* 8, 9, 10.

ROOT perennial, woody, about the thickneſs of the little finger, ſeldom larger, running deep into the earth, fibrous, of a yellowiſh colour, and ſlightly bitter taſte.

STALKS: in general ſeveral ariſe from the ſame root, upright, from one to two feet high, four ſquare, two ſides hollowed out, two roundiſh and grooved, and that alternately, armed with ſhort prickles, the branches alternately oppoſite.

LEAVES oppoſite, ſeſſile, veiny, deeply indented or cut in, narroweſt at bottom.

FLOWERS diſpoſed in long filiform erect ſpikes, ſupported by an oval pointed FLORAL-LEAF ſhorter than the Calyx, *fig.* 11.

CALYX: a PERIANTHIUM of one leaf, quinquedentate, *the fifth tooth exceedingly minute*, continuing, *fig.* 1, 2, 3.

COROLLA monopetalous, unequal, purpliſh, the TUBE cylindrical and crooked, the MOUTH villous, *fig.* 5. the LIMB divided into five *ſegments*, which are round and nearly equal, *fig.* 4.

STAMINA: four FILAMENTS very ſhort and ſcarce conſpicuous, four ANTHERÆ two of which are above the others, of the ſame form with thoſe of the Claſs Didynamia in general, *fig.* 6.

PISTILLUM: the GERMEN four ſquare, the STYLE filiform, growing thicker towards the extremity, the STIGMA obtuſe, *fig.* 7.

PERICARPIUM wanting, the Calyx containing the Seeds.

SEEDS four, oblong, obtuſe, on the inſide flatiſh and *white*, on the outſide brown, convex, *grooved and reticulated*, *fig.* 8, 9, 10.

The Vervain may be conſidered as a kind of domeſtic plant, not confined to any particular ſoil, but growing by the road ſides, pretty univerſally at the entrance into Towns and Villages.

It produceth its bloſſoms in the months of Auguſt and September.

There is only one Species of this Genus which grows wild in this country, but in different parts of the world the ſpecies are numerous, and what is remarkable, ſome have four and others but two Stamina, hence LINNÆUS ranks them among his *Diandrous* plants, making a diviſion of them into ſuch as have *flores Diandri* and *flores Tetrandri*. As our ſpecies hath four Stamina, two of which are above the other two, as the Style proceeds from the center of the four united Germina, and as four naked ſeeds follow, which are contained within the Calyx, we have placed it with SCOPOLI among the *Didynamia Gymnoſpermia* plants, a Claſs to which the botanic Student, who had been inſtructed in the Linnæan principles of Botany, would readily have been induced to refer it.

The ſeed of this plant has ſomething remarkably curious in its appearance, on the inſide it is of a ſnowy white, externally brown, and beautifully reticulated.

The Plant which the Romans called *Verbena*, appears to have been uſed on particular occaſions at a very early period, as a token of mutual confidence betwixt them and their Enemies. It was alſo conſtantly applied to the purpoſes of Superſtition and Enchantment, in making wreaths and brooms for their Altars, and chaplets for their Prieſts. It is probable from *Pliny's* account, that the plant which we now deſcribe was the ſame with that of the Antients, but in a larger ſenſe, they called the Laurel and Myrtle or whatever was bound round the Altar *Verbena*. The dry harſh nature of this herb, agrees but ill with the *Pinguis Verbena* of Virgil, perhaps it acquired that title from being anointed with the fat of the ſacrifice.

In later times Vervain has been accounted a ſovereign remedy in a multitude of diſorders; SCHRODER recommends it in upwards of thirty different complaints, on which Mr. Ray judiciouſly obſerves "*Mirum tot viribus pollere plantam nulla inſigni qualitate ſenſibili dotatam*"! ſtrange that a plant which inherits no remarkably ſenſible quality ſhould poſſeſs ſo many virtues!

Mr. Morley a late writer on the Vervain, conſiders it as extremely uſeful in the cure of the Schrophula or Kings evil, and in his Eſſay on the nature and cure of Schrophulous diſeaſes, has given us a figure of the plant with particular directions for its uſe, which conſiſts in hanging the root (which is to be of a larger or ſmaller ſize according to the age of his Patients) tied with a yard of *white* ſattin ribband round the neck, there to be worn till they recover.

Thoſe who know any thing of the effects of Medicines on the human body, will not eaſily be perſwaded that ſuch a kind of application can produce any very wonderful effect in this caſe, even making the greateſt allowance for the powers of the imagination; and Mr. Morley as if ſenſible of the inefficacy of his Vervain Amulet, calls to his aſſiſtance a number of powerful medicines, among others we find Mercury, Antimony, Hemlock, Jalap, &c; and by a repeated and oftimes a long continued application of Baths, Cataplaſms, Ointments, Poultices, Plaiſters, &c. and the exhibition of gentle purges and alterative medicines, ſome have been relieved and others cured; but can any one hence infer with any degree of reaſon that the Vervain Root had any ſhare in the cure? certainly no; out of all Mr. Morley's caſes there is not one which proves it, and the virtues of this plant ſtill remain to be aſcertained by rational experiments.

It ſhould be obſerved that the Schrophula is a diſeaſe which at certain periods of life and at certain ſeaſons of the year, is liable to be much worſe than at others, and frequently exceeding bad caſes of this kind have been cured by the moſt ſimple applications.

Many people have no doubt applied to Mr. Morley from a ſuppoſition that his motives were perfectly diſintereſted, and it muſt be confeſſed that there are Empirics much more mercenary and infinitely more dangerous; yet it does not appear but Mr. Morley acts nearly on the ſame principle with other Practioners in Phyſick, with this difference indeed, that they receive their fees in ſpecie, he takes his in kind.

That we may not be thought to act diſingenouſly by Mr. Morley we ſhall quote his own words—"Many many Guineas have been offered me but I never take any money. Sometimes indeed genteel People have ſent me ſmall acknowledgements of Tea, Wine, Veniſon, &c. Generous ones, ſmall pieces of Plate or other little Preſents. Even neighbouring Farmers a Gooſe or Turkey, &c. by way of Thanks.

LAMIUM PURPUREUM. RED LAMIUM OR DEAD NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA. *Corollæ* labium ſuperius integrum, fornicatum, labium inferius bilobum; faux utrinque margine dentata. *Lin. Deſcrip. Gen. abbrev.* *Raii Syn. Gen.* 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

LAMIUM *purpureum* foliis cordatis obtuſis petiolatis. *Linnæi Syſt. Vegetab. p.* 446. *Sp. Pl.* 809. *Fl. Suecic.* 203.

LAMIUM foliis cordatis, obtuſis, in ſummo ramo congeſtis. *Haller. hiſt. v.* 1. 118.

LAMIUM *purpureum. Scopoli Fl. Carniol. p.* 407. *n.* 701.

LAMIUM purpureum fætidum, folio ſubrotundo, ſive Galeopſis Dioſcoridis. *Bauhin. pin.* 230. *Lamium rubrum. Gerard emac.* 703. *Parkinſon.* 604. *Raii. Synopſis* Small Dead Nettle or red Archangel 240. *Hudſon. Fl. Angl.* 225. *Oeder. Fl. Dan. icon.* 523.

RADIX annua, fibroſa.

CAULES plures, ad baſin debiles, et ramoſi, prope ſummitatem fere nudi, et ſæpe colorati, ſemipedales, quadrangulares, fiſtuloſi, ſcrabiuſculi.

FOLIA oppoſita, venoſa, hirſutula, inferiora ſubrotundo-cordata, crenata, longe petiolata: ſuperiora ovato-cordata, obtuſe ſerrata, petiolis brevibus inſidentia, alterne oppoſita, reflexa, denſe et imbricatim congeſta, et rubedine tincta.

FLORES purpurei, in ſummis caulibus verticillatim denſius ſtipati. Verticilli multiflori.

CALYX: PERIANTHIUM monophyllum, tubulatum, ſuperne patentius, quinquedentatum, ſubſtriatum, hirſutulum, dentibus ſubæqualibus, acuminatis. *fig.* 1.

COROLLA monopetala, ringens, pallide purpurea, *fig.* 2; TUBUS brevis, cylindraceus, *fig.* 6; FAUX inflata, margine utroque bidentata, *fig.* 4; denticulo ſuperiori ſpinæ ſimili, inferiore obtuſiore, maculâ notata; labium ſuperius, *fig.* 3, ovatum, concavum, villoſulum, integrum, labium inferius bilobum, maculatum, lobis patentibus. *fig.* 5.

STAMINA: FILAMENTA quatuor, ſubulata, alba, ſub labio ſuperori tecta, quorum duo longiora, *fig.* 7; ANTHERÆ oblongæ, barbatæ, polline croceo repletæ. *fig.* 8.

PISTILLUM: GERMEN quadrifidum; STYLUS filiformis, longitudine et ſitu ſtaminum; STIGMA bifidum, acutum, *fig.* 9, 10, 11.

SEMINA 4 in fundo calycis, pallida, triangularia, apice truncata, marginata, *fig.* 12.

ROOT annual and fibrous.

STALKS ſeveral, at bottom weak and branched, near the top almoſt naked, and frequently coloured, ſix inches or more in height, quadrangular, hollow, and ſlightly rough.

LEAVES oppoſite, veiny, ſlightly hairy, the lower ones of a roundiſh-heart ſhaped form, notched, and placed on footſtalks, the uppermoſt ones oval-heart-ſhaped, obtuſely ſerrated, with ſhort footſtalks, alternately oppoſite, growing thickly together, bent back and laying one over another, of a reddiſh colour.

FLOWERS purple, growing thickly together on the tops of the ſtalks in whirls; many flowers in each whirl.

CALYX: a PERIANTHIUM of one leaf, tubular, at top ſpreading, with five teeth, ſomewhat ſtriated and hairy, the teeth nearly equal and long pointed. *fig.* 1.

COROLLA monopetalous, gaping, of a pale purple colour, *fig.* 2; the TUBE ſhort and cylindrical, *fig.* 6; the ENTRANCE OF THE TUBE inflated, the margin on each ſide furniſhed with two teeth, *fig.* 4; the uppermoſt pointed like a thorn, the lowermoſt blunter with a ſpot on it; the upper lip *fig.* 3; oval, hollow, ſlightly villous, entire, the under lip divided into two lobes, ſpreading a little from one another, and ſpotted, *fig.* 5.

STAMINA: four FILAMENTS, tapering and white, hid under the upper lip, two of which are longer than the reſt *fig.* 7; the ANTHERÆ oblong, bearded, and and full of a yellow pollen *fig.* 8.

PISTILLUM: GERMEN quadrifid; STYLUS filiform, the length of the Stamina; STIGMA bifid and pointed *fig.* 9, 10, 11.

SEEDS 4 in the bottom of the Calyx, of a pale brown, triangular, cut off as it were at top, with a margin round them, *fig.* 12.

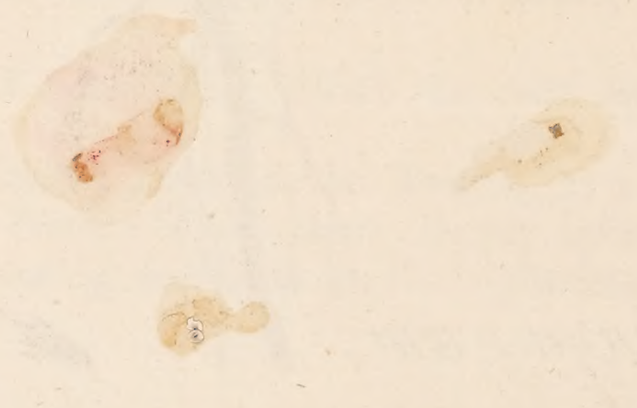
Although this plant may perhaps with propriety be conſidered as a Weed in Gardens, yet the bright colour of its tops and flowers, joined to its early appearance, contributes not a little to ornament our banks in the Spring, when few other plants appear in bloſſom.

The Flowers are moſt commonly of a bright red colour, ſometimes white, and are much reſorted to by Bees of various kinds.

The Leaves and Flowers are thoſe parts of the plant, which are uſed in Medicine, although in the preſent practice they are ſcarce regarded.

According to LINNÆUS it is boiled in *Upland*, a Province of *Sweden*, as a pot herb. A Variety of this plant occurs not unfrequently about Town, which has its leaves more deeply indented. RAY calls it *Lamium rubrum minus*, *foliis profunde inciſis*. I have found it growing on a bank on the right hand ſide of the way between *Pimlico* and *Chelſea*.

Lamium purpureum.



Thymus acinos.

THYMUS *ACINOS.* BASIL THYME.

THYMUS *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Calycis bilabiati faux villis clauſa.

Raii Synop. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

THYMUS *Acinos* caulibus adſcendentibus, foliis dentato-ſerratis, calycibus baſi ventricoſis.

THYMUS *Acinos* floribus verticillatis, pedunculis unifloris caulibus erectis ſubramoſis, foliis acutis, ſerratis. *Linn. Syſt. Vegetab. p.* 452. *Flor. Suecic. p.* 209.

CLINOPODIUM foliis ovatis acutis ſerratis, flore foliis breviore. *Haller. hiſt. helv. n.* 237.

THYMUS *Acinos. Scopoli Fl. Carniol. p.* 426. *n.* 735.

CLINOPODIUM arvenſe ocimi facie. *Bauhin. pin. p.* 225.

CLINOPODIUM minus ſive vulgare. *Parkinſon.* 21.

OCYMUM ſylveſtre. *Gerard. emac.* 675.

ACINOS multis. *Bauhin. hiſt.* 32. 259. *Raii Syn. p.* 238. Wild Baſil. *Hudſon Fl. Angl. p.* 230.

ADIX annua, ſimplex, fibroſa.

AULES adſcendentes, ſemipedales, tetragoni, ramoſi, hirſuti, purpuraſcentes; RAMI cauli ſimiles longi, patentes, imi oppoſiti.

OLIA oppoſita, petiolata, ovato-acuta, medium interius petiolo proximum integrum, exterius mucroni proximum dentatum, margines paululum reflexi, ciliati, nervo medio veniſque ſubtus hirſutis, ſuperne vix hirſuta, impunctata, venis quam in ſerpyllo profundius exaratis.

LORES pedunculati, verticillati, ſpicati, plerumque ſex in ſingulo verticillo.

ALYX: PERIANTHIUM monophyllum, tubulatum, *baſi ventricoſum*, ſtriatum, hirſutum, quinquedentatum, dentibus tribus ſuperioribus brevioribus, reflexis, inferioribus ſetaceis, fauce villis clauſo, *fig.* 1.

OROLLA monopetala, tubuloſa, purpurea, bilabiata, labium ſuperius brevius, obtuſum, reflexum, emarginatum, inferius trifidum, laciniis ſubrotundis, medio productiore ſubemarginato, *macula alba, lunulata, prominente, notata, fig.* 3, 4, 5.

TAMINA: FILAMENTA quatuor, quorum duo longiora, Corollâ breviora; ANTHERÆ parvæ, rubræ, *fig.* 6.

ISTILLUM: GERMEN quadripartitum; STYLUS filiformis longitudine Staminum; STIGMA bifidum, acutum, *fig.* 7.

ERICARPIUM nullum

EMINA quatuor oblonga intra Calycem, *fig.* 8, 9.

ROOT annual, ſimple and fibrous.

STALKS adſcending, about ſix inches high, ſquare, branched, hirſute, purpliſh; BRANCHES like the ſtalk, long, ſpreading, the bottom ones oppoſite.

LEAVES oppoſite, ſtanding on foot-ſtalks, of a pointed oval ſhape, the inner middle part of them next the foot-ſtalks entire, the outer middle part next the point indented, the edges turned a little back and ciliated, the midrib and veins on the under ſide of the leaf hirſute, the upper ſurface of the leaves ſcarcely hairy, without any dots, the veins deeper than in the common Wild Thyme.

FLOWERS growing on foot-ſtalks, in whirls, forming a ſpike, generally ſix in each whirl.

CALYX: a PERIANTHIUM of one leaf, tubular, *bellying out at bottom*, ſtriated, hirſute, having five teeth, the three uppermoſt of which are ſhorteſt and turned back, the lower ones ſlender and tapering, the moth cloſed up with ſhort hairs, *fig.* 1.

COROLLA monopetalous, tubular, purple, having two lips, the uppermoſt of which is ſhorteſt, blunt, turned back, with a ſlight notch in it; the lowermoſt divided into three roundiſh ſegments, the middle one of which is longer than the others, very ſlightly notched in, and marked with *a raiſed white ſemilunar ſpot, fig.* 3, 4, 5.

STAMINA: four FILAMENTS, two long and two ſhort, within the Corolla; ANTHERÆ ſmall and red, *fig.* 6.

PISTILLUM: GERMEN divided into four parts; STYLE filiform, the length of the Stamina; STIGMA bifid and acute, *fig.* 7.

SEED-VESSEL none.

SEEDS. Four oblong ſeeds within the Calyx, *fig.* 8, 9.

As there are only two ſpecies of *Thyme* growing wild in this Kingdom, and thoſe very different from each other, he young Botaniſt cannot be at a loſs in diſtinguiſhing them; with the *Thymus alpinus*, (figured by that accurate Botaniſt JACQUIN, in his *Fl. Auſtriac*, who has contributed much to the advancement of botanic knowledge,) his plant has a much greater affinity, but may be diſtinguiſhed by attending to the ſize of the flowers and the ſhape f the Calyx: the flowers of the *alpinus* are nearly twice as large as thoſe of the *acinos*, and the Calyx of the latter has protuberance at its baſe which we do not find either in the *alpinus* or *ſerpyllum*; a white circular mark in the nouth of the flowers, makes the bloſſoms of this ſpecies ſtrikingly different from thoſe of Wild Thyme.

The moſt common place of growth for this plant is in uncultivated fields, particularly where the ſoil is chalky, bout *Charlton* it is found in abundance, flowering in July and Auguſt.

A variety with a white flower ſometimes occurs.

The ſame agreeable aromatic flavour predominates in this ſpecies as in the Wild Thyme, whence it is proable that their virtues are very ſimilar.

EUPHRASIA ODONTITES. RED EYE-BRIGHT.

EUPHRASIA *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Raii Syn. Gen. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

EUPHRASIA *Odontites* foliis linearibus: omnibus ſerratis. *Linnæi Syſt. Vegetab. Sp. Pl. p.* 841. *Fl. Suecic. p.* 213. *n.* 544.

ODONTITES bractæis ſerratis hirſutis. *Haller. hiſt. v.* 1. *p.* 134. *n.* 304.

EUPHRASIA *Odontites. Scopoli Fl. Carniol. p.* 435.

EUPHRASIA pratenſis rubra. *Bauhin Pin. p.* 234.

EUPHRASIA pratenſis rubra major. *Parkinſon* 1329.

CRATÆOGONON Euphroſyne. *Ger. emac.* 91. *Raii Syn. p.** 284. Eye-bright Cow-wheat. *Hudſon Fl. Angl. p.* 234.

RADIX annua, ſimplex, fibroſa, lignea.

CAULIS erectus, ramoſiſſimus, ſemipedalis, ad bipedalem, hirſutus, obtuſe quadrangularis.

RAMI cauli ſimiles, oppoſiti.

FOLIA alterne oppoſita, ſeſſilia, lineari-lanceolata, reflexa, rariter dentata, hirſutula, venoſa, venis parvis, ſubtus hirſutis.

BRACTEÆ lanceolatæ, ſuberectæ, purpuraſcentes.

FLORES ſpicati, ſecundi, ſpicis apice ſubnutantibus,

CALYX: PERIANTHIUM monophyllum, tubuloſum, quadridentatum, hirſutum, dentibus æqualibus, acutis, *fig.* 1.

COROLLA monopetala, ringens, labium ſuperius concavum, ſubemarginatum, inferius tripartitum, laciniis obtuſis, æqualibus, *fig.* 2.

STAMINA: FILAMENTA quatuor, quorum duo paulo breviora, alba; ANTHERÆ bilobæ, biloculares, apice filamentoſæ, baſi ſpinulis duabus terminatæ, deorſum ubi filamentum inſeritur appendiculis clavatis pluribus inſtructæ, *fig.* 3, 4, 5.

PISTILLUM: GERMEN ovatum, hirſutulum; STYLUS filiformis, in flore nondum explicato ſub labio ſuperiore Corollæ involutus, poſtea Corollâ longior; STIGMA capitatum, *fig.* 6.

PERICARPIUM: CAPSULA ovato-oblonga, compreſſa, bilocularis, *fig.* 7.

SEMINA plurima, albida, ſtriata, *fig.* 8.

ROOT annual, ſimple, fibrous, and woody.

STALK upright, very much branched, from ſix inches to two feet high, hirſute, and obtuſely ſquare.

BRANCHES like the ſtalk and oppoſite.

LEAVES alternately oppoſite, ſeſſile, betwixt linear and lanceolate, turning back, thinly indented, ſlightly hirſute, veiny, veins few and hirſute underneath.

BRACTEÆ lanceolate, nearly upright, purpliſh.

FLOWERS growing in ſpikes of a red colour, inclined all one way, the ſpikes nodding a little at top.

CALYX: a PERIANTHIUM of one leaf, tubular, quadridentate, hirſute, the teeth equal and ſharp, *fig.* 1.

COROLLA monopetalous, gaping, the upper lip concave and ſlightly notched in; the lower lip divided into three, obtuſe, equal ſegments, *fig.* 2.

STAMINA: four FILAMENTS, two ſomewhat longeſt, white; ANTHERÆ compoſed of two lobes and two cavities, at top thready, at bottom terminated by two little ſpines, and on the back part where the filament is inſerted, furniſhed with ſeveral ſmall club-ſhaped threads or appendages, *fig.* 3, 4, 5.

PISTILLUM: GERMEN oval, hirſute; STYLE filiform, before the flower opens bent in underneath the upper lip of the Corolla; afterwards longer than the Corolla; STIGMATA forming a little head, *fig.* 6.

SEED-VESSEL an oval, oblong, flattiſh CAPSULE, of two cavities, *fig.* 7.

SEEDS ſeveral, whitiſh and ſtriated, *fig.* 8.

This ſpecies of *Eyebright*, which is exceedingly different from the common ſort, grows very common in Paſtures, ſometimes in Corn-fields, and flowers in July and Auguſt: it differs very much in ſize according to the place it grows in, and is now and then found with white flowers.

It is not remarked either for its beauty or utility.

Euphrasia Odontites.

ANTIRRHINUM *CYMBALARIA*. IVY-LEAV'D ANTIRRHINU

ANTIRRHINUM *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Raii Syn. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANTIRRHINUM *Cymbalaria* foliis cordatis quinquelobis alternis, caulibus procumbentibus. *Lin*

Syſt. Vegetab. p. 464. *Sp. Pl. p.* 851.

ANTIRRHINUM caule repente, foliis reniformibus, quinquelobatis. *Haller hiſt. p.* 146. *n.* 339.

ANTIRRHINUM *Cymbalaria Scopoli Fl. Carniol. n.* 770.

CYMBALARIA *Bauhin pin.* 306.

LINARIA *hederaceo folio glabro, ſeu Cymbalaria vulgaris. Tourn.* 169. *Garidel.* 287. *Gouan. Fl. Mon*

p. 100. *Gerard Fl. Galloprov. p.* 292. *Raii Syn. p.* *282. *Hudſon Fl. Angl. p.* 237.

Tota Planta glabra, cum odore ingrato.

The whole plant ſmooth, with a diſagreeable ſmell.

RADIX perennis, fibroſa, intra fiſſuras murorum penetrans; eradicatione difficilis.

ROOT perennial, fibrous, penetrating between t crevices of the walls, and ſcarce to be erad cated.

CAULES plures, confertim naſcuntur, baſi repentes, procumbentes, ramoſi, teretes, glabri, purpuraſcentes, nervo intus duriore et tenaciore ſicut in Alſine.

STALKS numerous, growing in a kind of tuft, cree ing at bottom, procumbent, branched, roun ſmooth, purpliſh, and ſtringy as in Chic weed.

FOLIA quinquelobata, glabra, ſubcarnoſa, oppoſita, aut alterna, ſæpe purpuraſcentia, *fig.* 12.

LEAVES quinquelobate, ſmooth, ſomewhat fleſh ſome of them oppoſite, others alternate, fr quently purpliſh, *fig.* 12.

PETIOLI longi, ſuperne ſulcati.

FOOT-STALKS of the leaves long, on the upper pa grooved.

PEDUNCULI teretes, petiolis paulo longiores.

FOOT-STALKS of the flowers, round, a little long than the foot-ſtalks of the leaves.

CALYX: PERIANTHIUM quinquepartitum, laciniis lanceolatis, perſiſtentibus, *fig.* 1.

CALYX: a PERIANTHIUM divided into five ſegment which are lanceolate and continuing, *fig.* 1.

COROLLA monopetala, ringens; TUBUS brevis, *fig.* 6; LIMBUS bilabiatus, labium ſuperius bifidum, reflexum, purpureum, venis duabus ſaturatioribus ſtriatum, *fig.* 2. inferius trifidum, laciniis ſubrotundis, albidis, *fig.* 3; PALATUM prominens, bifidum, flavum, *fig.* 5, FAUX villoſum, croceum.

COROLLA monopetalous, ringent; the TUBE ſhor *fig.* 6: the LIMB divided into two lips; th upper lip bifid, turning back, and purple, ſtr ped with two veins of a deeper colour, *fig.* 2 the lower lip trifid, the ſegments round an whitiſh, *fig.* 3; the PALATE prominent, bifid and yellow, *fig.* 4; the MOUTH or entranc into the tube villous and ſaffron-coloured.

NEECTARIUM purpureum, conicum, longitudine calycis, *fig.* 5.

NECTARY purple, conical, the length of the Calyx *fig.* 5.

STAMINA: FILAMENTA quatuor, duo breviora; ANTHERÆ bilobæ, albæ, conniventes, *fig.* 7.

STAMINA: four FILAMENTS, two ſhort and two long; ANTHERÆ compoſed of two lobes, white and connivent, *fig.* 7.

PISTILLUM: GERMEN ſubrotundum, purpureum; STYLUS filiformis; STIGMA obtuſum, *fig.* 8.

PISTILLUM: GERMEN roundiſh and purple; STYLE filiform; STIGMA blunt, *fig.* 8.

PERICARPIUM CAPSULA ſubrotunda, rugoſa, ſeminibus protuberantibus, bivalvis, valvis apice in plures lacinias dehiſcentibus, *fig.* 9, 10.

SEED-VESSEL a roundiſh CAPSULE, ſurface uneven, from the ſeeds protuberating, of two valves, which open at top into ſeveral laciniæ, *fig.* 9, 10.

SEMINA nigra, ſubrotunda, rugoſa, *fig.* 10.

SEEDS black, roundiſh and wrinkled, *fig.* 10.

This Species of *Antirrhinum* is ſo perfectly diſtinct from all the others which grow wild in this country, that there is no poſſibility of miſtaking it. It is found in great plenty in all thoſe parts near London, that lay within the reach of the Thames; the ſeeds are carried by the flux and reflux of the tide up and down the river, and left at high water mark in the crevices of old walls, where they take root and encreaſe very faſt. It is ſuppoſed to have been introduced to us from Italy, whether for the purpoſes of ornament or medicine is uncertain.

The Walls of the *Phyſic Garden*, at *Chelſea*, from whence it has probably originated in this country, are plentifully covered with it; it may alſo be found on the *Temple* Walls, and at the ſides of the ſtream running under *Vauxhall* Turnpike.

In ſome ſituations the leaves grow much larger than thoſe of the annexed ſpecimen.

Antirrhinum Cymbalaria.

ANTIRRHINUM *ELATINE*. SHARP-POINTED FLUELLIN.

ANTIRRHINUM *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO IRREGULARI.

ANTIRRHINUM foliis haſtatis alternis, caulibus procumbentibus. *Linn. Sp. Pl.* 85.

ANTIRRHINUM caule procumbente, foliis haſtatis, imis conjugatis, ſuperioribus alternis. *Haller hiſt. v.* 1. *p.* 14. 6. *n.* 340.

ELATINE folio acuminato, in baſi auriculato, flore luteo. *Bauhin Pin.* 253.

ELATINE folio acuminato. *Parkinſon* 553.

ELATINE altera. *Gerard emac.* 623.

LINARIA *Elatine* dicta, folio acuminato. *Raii Syn.* *282.

ANTIRRHINUM *Elatine*. *Hudſon Fl. Angl. p.* 237. *Scopoli Fl. Carniol. p.* 444. *OEder. Fl. Dan. Ic.* 426.

TOTA PLANTA piloſa.
RADIX fibroſa, annua, albida,
CAULES numeroſi, teretes, ſubramoſi, in junioribus plantis ſuberecti, tandem procumbentes, ad duos pedes et ultra ſæpe extenſi.

FOLIA petiolata, ima ſubrotunda, oppoſita; proxima dentata, alterna; quæ ſequuntur magna ex parte haſtata.

PEDUNCULI axillares, alterni, penduli, longitudine foliorum.
CALYX: PERIANTHIUM quinquepartitum, perſiſtens, ſegmentis ovato-lanceolatis acutis, *fig.* 1.
COROLLA monopetala, ringens, flava; TUBUS breviſſimus; LIMBUS bilabiatus, labium ſuperius biſidum, ſegmentis obtuſis, inferne purpureis, inferius triſidum, ſegmentis obtuſis, medio productiore, et paulo minore; PALATUM prominulum, flavum, *fig.* 2; NECTARIUM ſubulatum, flavum, longitudine ſegmentorum calycis, *fig.* 3.
STAMINA: FILAMENTA quatuor, quorum duo paulo longiora; ANTHERÆ purpureo-fuſcæ, coaleſcentes, *fig.* 4.
PISTILLUM: GERMEN ſubrotundum, compreſſum, apice villoſum; STYLUS filiformis, longitudine ſtaminum, apice incraſſatus, uncinatus; STIGMA ſimplex, *fig.* 5, 6, 7.
PERICARPIUM: CAPSULA rotunda, bilocularis, bivalvis, valvis deciduis, foramine magno in utroque latere capſulæ relicto, valvæ orbiculatæ, concavæ, *fig.* 8, 9, 10.
SEMINA nigra, rugoſa, 8--10 in ſingulo loculamento, *fig.* 12.

THE WHOLE PLANT hairy.
ROOT fibrous, annual, whitiſh.
STALKS numerous, round, a little branched, in the young plants nearly upright, in the old ones trailing on the ground, frequently to the diſtance of two feet or more.
LEAVES ſtanding on foot-ſtalks, the bottom leaves roundiſh and oppoſite, the next to thoſe are indented and alternate, and thoſe which follow are for the moſt part haſtate.
PEDUNCLES alternate, pendulous, the length of, and proceeding from the Alæ of the leaves.
CALYX: a PERIANTHIUM divided into five ſegments perſiſting, the ſegments lanceolate, *fig.* 1.
COROLLA monopetalous, ringent, and yellow; the TUBE very ſhort; the LIMB divided into two lips, the upper lip bifid, the ſegments obtuſe, and purple underneath; the lower lip trifid, the ſegments obtuſe, the middle one longeſt and leaſt; the PALATE prominent and yellow, *fig.* 2; the NECTARIUM the length of the ſegments of the Calyx, ſmall and tapering, *fig.* 3.
STAMINA four FILAMENTS, two of which are a little longer than the others; the ANTHERÆ purpliſh-brown, adhering together, *fig.* 4.
PISTILLUM: the GERMEN roundiſh, flattened, at top hairy; the STYLE filiform, the length of the Stamina, thickened at top and hooked; the STIGMA ſimple, *fig.* 5, 6, 7.
SEED-VESSEL: a round CAPSULE of two cavities and two valves, the valves round and concave, on falling off leaving a large hole in each ſide of the Capſule, *fig.* 8, 9, 10.
SEEDS black, and wrinkled, from 8 to 10 in each cavity, *fig.* 12.

THIS ſpecies of *Antirrhinum* grows generally in Corn-fields, and in ſome parts of England is much more common than it is with us; in the Corn-fields about *Peckham* I have generally found it in bloom in July, Auguſt and September, and even later; it very much reſembles the *Antirrhinum ſpurium* in its general habit, but is readily diſtinguiſhed by its *pointed leaves.* Some Writers have conſidered it as poſſeſſed of healing properties, and affirm that the expreſſed juice of the plant, or its diſtilled water taken inwardly and applied externally, has checked and cured ſpreading and cancerous Ulcers; and RAY relates a Story from LOBEL of a poor Barber, who by the above uſe of this plant, ſaved his Noſe, which had been condemned to be cut off by ſeveral eminent Phyſicians and Surgeons.

Antirrhinum Elatine.

ANTIRRHINUM *LINARIA*. COMMON YELLOW TOAD FLAX.

ANTIRRHINUM *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANTIRRHINUM *Linaria* foliis lanceolato-linearibus confertis, caule erecto, ſpicis terminalibus ſeſſilibus, floribus imbricatis. *Linn. Syſt. Vegetab. p.* 466. *Fl. Suecic.* 217.

ANTIRRHINUM foliis linearibus adſcendentibus congeſtis, caule erecto ſpicato. *Haller. hiſt. V.* 1. *p.* 145.

LINARIA vulgaris lutea flore majore. *Bauhin pin. p.* 212.

LINARIA lutea vulgaris. *Gerard emac.* 550. vulgaris noſtras. *Parkinſon* 458. *Raii Syn. p.* *281. *Hudſon Fl. Angl. p.* 238. *Scopoli Fl. Carniol. p:* 442:

RADIX perennis, alba, dura, lignoſa, per terram reptando immenſùm ſe propagans.

CAULES plerumque plures ex eadem radice, erecti, pedales aut cubitales, folioſiſſimi, teretes, læves.

FOLIA linearia, acuta, conferta, ſparſa, glauca.

FLORES lutei, palato croceo, in ſummis caulibus in ſpicas denſas imbricatim congeſti.

CALYX: PERIANTHIUM quinquepartitum, breve, perſiſtens, laciniis ovato-lanceolatis, ſuperiore cæteris paulo longiore, duabus inferioribus magis dehiscentibus, *fig.* 1.

COROLLA monopetala ringens, lutea, *fig.* 3. TUBUS brevis; LIMBUS bilabiatus, *fig.* 4. LABIUM *ſuperius* bifidum, laciniis primum deflexis, poſtea reflexis conniventibus, *fig.* 5; LABIUM *inferius* trifidum, laciniis obtuſis, intermedio breviore minore, *fig.* 6; FAUX clauſa PALATO prominente, bifido, croceo, ad baſin villoſo, *fig.* 7.

STAMINA: FILAMENTA quatuor, alba, ſub labio ſuperiori incluſa, quorum duo breviora, ad baſin villoſa, *fig.* 9; ANTHERÆ flavæ, conniventes, *fig.* 10.

PISTILLUM: GERMEN ſubrotundum, STYLUS filiformis, albus; STIGMA obtuſum.

PERICARPIUM: CAPSULA ovato-cylindracea, bilocularis, apice in plures lacinias dehiſcens, *fig.* 14, 15, 16.

SEMINA numeroſa, nigra, plana, medio extuberantia, *fig.* 17.

ROOT perennial, white, hard and woody, creeping under the earth, and propagating itſelf very much.

STALKS: generally ſeveral ariſe from the ſame root, upright, from one to two feet high, very full of leaves, round and ſmooth.

LEAVES linear, pointed, growing very thick together on the ſtalk without any regular order, ſmooth, and of a blueiſh colour.

FLOWERS yellow, with the palate of an orange or ſaffron colour, placed one over another in thick ſpikes on the top of the Stalks.

CALYX: a PERIANTHIUM divided into five ſegments ſhort and continuing, the ſegments oval and pointed, the upper one a little longer than the reſt, the two inferior ones gaping wideſt, *fig.* 1.

COROLLA monopetalous, ringent, and yellow, *fig.* 3; the TUBE ſhort; the LIMB compoſed of two LIPS, *fig.* 4; the *upper* LIP bifid, the ſegments firſt bending down, afterwards turned back and cloſing together, *fig.* 5; the *lower* LIP trifid, the ſegments obtuſe, the middle one ſhorteſt and leaſt, *fig.* 6; the MOUTH cloſed by a PALATE prominent, bifid, of a ſaffron colour, and villous at bottom, *fig.* 7.

STAMINA: four white FILAMENTS, incloſed under the upper lip of the Corolla, two of which are ſhorter than the other two, at bottom villous, *fig.* 9; ANTHERÆ yellow, ſlightly connected together, *fig.* 10.

PISTILLUM: GERMEN roundiſh, STYLE filiform and white; STIGMATA obtuſe.

SEED-VESSEL a CAPSULE of an oval and cylindrical ſhape, having two cavities, and ſplitting at top into ſeveral diviſions, *fig.* 14, 15, 16.

SEEDS numerous, black, flat, protuberant in the middle, *fig.* 17.

Mr. Ray in his *Hiſtoria Plantarum* has collected the Authorities of ſeveral writers who ſpeak highly of the medical virtues of this Plant. At the ſame time that we by no means believe in all the Virtues which are attributed to many plants by the old Authors, we would be carefull of rejecting all their accounts, particularly when there is ſome reaſon to think they may be founded in Truth, the mention of them may at leaſt ſerve to excite ſuch of the Faculty as have proper opportunities to give them a fair trial, and either reject them entirely, or bring them more generally into practice.

According to ſome it opperates both by Stool and Urine, and ſo much by the latter, as to acquire among the *Germans* the name of *Harnkrout*. A ſmall Glaſs of the diſtilled Water mixed with a drachm of the bark of the *Ebulus* or *Water Elder* in powder. powerfully provokes Urine, and is recommended in Dropſical Caſes. The diſtilled water or juice of the Plant put in the Eyes, takes away the redneſs and inflamation of them, as TRAGUS aſſerts from his own long obſervation and experience. Made into an Ointment with lard and mixed with the yolk of Egg, it takes away the violent pain ariſing from the Piles.

The flowers of this plant are frequently found double with two or more Spurs, and a ſingular variety of it which LINNÆUS calls *Peloria*, is ſaid by Mr. HUDSON to grow about *Clapham* in Surry, this rare monſtroſity we ſhall not fail to figure.

In its common ſtate, the Toad Flax grows very common on banks by the road ſides, which it decorates not a little by its ſingular and beautiful Flowers. It may with the greateſt eaſe be cultivated in Gardens, and raiſed either from Seeds or Roots; the Seed is ripe at the latter end of September.

Antirrhinum Linaria.

DIGITALIS PURPUREA. FOX-GLOVE.

DIGITALIS *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Cal. 5-partitus. *Cor.* campanulata 5-fida, ventricosa. *Caps.* ovata biloculari

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

DIGITALIS *purpurea* calycinis foliolis ovatis acutis, corollis obtusis : labio superiore integro. *Linn. Syst.*

Vegetab. p. 570. *Sp. Pl. p.* 866.

DIGITALIS foliis calycinis ovatis, galea simplici. *Haller. hist. p.* 143. *n.* 330.

DIGITALIS *purpurea. Scopoli Fl. Carniol. p.* 447. *n.* 780.

DIGITALIS *purpurea* folio aspero. *p.* 243.

DIGITALIS *purpurea. Gerard. emac.* 790.

DIGITALIS *purpurea* vulgaris. *Parkinson* 1653. *Raii. Syn. p.** 283. Purple Fox-glove. *Hudson Fl.*

Angl. p. 240. *Oeder Fl. Dan Icon.* 774.

RADIX biennis, fibrosa.

CAULIS tripedalis ad orgyalem, simplex, erectus, foliosus, teres, pubescens.

FOLIA ovato-acuta, serrata, venosa, subtus albida, pubescentia ; PETIOLI breves, alati.

FLORES spicati, nutantes, imbricati, secundi.

PEDUNCULI uniflori, pubescentes, apice incrassati, peractâ floreſcentiâ suberecti.

CALYX: PERIANTHIUM quinquepartitum, laciniis ovato-acuminatis, nervosis, supremâ angustiore, *fig.* 1.

COROLLA monopetala, subcampanulata, purpurea, interne ocellata ; TUBUS magnus, patens, deorsum ventricosus, basi cylindracea, arcta; LIMBUS parvus, quadrifidus, laciniâ superiore integra, quasi truncata, inferiore majore, inflexa.

STAMINA: FILAMENTA quatuor basi Corollæ inserta, alba, apice paululum latiora, basi infracta, quorum duo longiora ; ANTHERÆ primum magnæ, turgidæ, ovatæ, basi coadunatæ, lutescentes, et sæpe maculatæ ; demum et formâ et situ mire mutantur, *fig.* 2, 3, 4.

PISTILLUM : GERMEN subconicum, luteo-virens ; STYLUS simplex ; STIGMA bifidum, *fig.* 5, 6, 7.

NECTARIUM GLANDULA basin Germinis cingens, *fig.* 8.

PERICARPIUM : CAPSULA ovato-acuminata, biloculari, bivalvis, valvulâ inferiore findente, *fig.* 9.

SEMINA plurima, nigricantia, parva, utraque extremitate truncata, *fig.* 10.

ROOT biennial and fibrous.

STALK from three to six feet high, simple, upright, leafy, round, and pubescent or downy.

LEAVES of a painted oval shape, serrated, veiny, underneath whitish and pubescent ; the FOOT-STALKS short and winged.

FLOWERS growing in a spike, pendulous, laying one over another all one way.

PEDUNCLES sustaining one flower, pubescent, thickest at top, after the flower drops off, becoming nearly upright.

CALYX : a PERIANTHIUM divided into five segments, which are of an oval pointed shape, and nervous, the uppermost narrower than the rest, *fig.* 1.

COROLLA monopetalous, somewhat bell-shaped, purple, and marked in the inside with little eyes ; the TUBE large, spreading, bulging out backwards; the base cylindrical, and as if it had been tyed with a ligature ; the LIMB small and quadrifid, the upper segment entire and as if cut off, the lower segment larger and bent in.

STAMINA : four FILAMENTS inserted into the bottom of the Corolla, white, a little broadest at top, crooked at bottom, two long and two short ; ANTHERÆ at first large, turgid, oval, touching at bottom, of a yellowish colour and often spotted ; lastly changing both their form and situation in a singular manner, *fig.* 2, 3, 4.

PISTILLUM : GERMEN rather conical, of a yellow green colour; STYLE simple ; STIGMA bifid, *fig.* 5, 6, 7.

NECTARY a GLAND surrounding the bottom of the Germen, *fig.* 8.

SEED-VESSEL : a pointed oval CAPSULE, of two cavities and two valves, the lowermost valve splitting in two, *fig.* 9.

SEEDS numerous, blackish, small, as if cut off at each end, *fig.* 10.

Was it not that we are too apt to treat with neglect the beautiful plants of our own country, merely because they are common and easily obtained, the stately and elegant *Fox-glove* would much oftener be the pride of our gardens than it is at present ; for it is not only peculiarly striking at a distance, but its flowers and their several parts become beautiful in proportion to the nearness of our view : How singularly and how regularly do the blossoms hang one over another ! How delicate are the little spots which ornament the inside of the flower ! and like the wings of some of our small Butterflies smile at every attempt of the Painter to do them justice : how pleasing is it to behold the nestling Bee hide itself in its pendulous blossoms ! while extracting its sweets which furnish our tables with honey and our manufacturers with wax : nor are the more interior parts of the flower less worthy of our admiration or less adapted to the improvement of the young Botanist : here all the parts of the fructification being large, he will readily obtain a distinct idea of them ; but more particularly of the form of the Antheræ, and the alteration which takes place in them, previous to and after the discharge of the Pollen. *vid. fig.* 3, 4.

The flowers of this plant are in general of a fine purple colour, and like all other purple flowers are liable to variations ; sometimes we find the blossoms of a milk white or cream colour, and some other varieties of it are mentioned by RAY, but the white is the most common. Such as would wish to cultivate it, may raise it either from seed, which is very small for the size of the plant, or from young plants. It grows naturally in a dry and gravelly soil, and in such situations is common enough over most parts of England ; about *Charlton-Wood* it is very plentiful, and flowers in July and August.

According to the testimony of many writers, the juice or decoction of this plant taken inwardly, acts as an emetic and purgative, and that too with considerable violence ; hence Mr. RAY very properly advises it to be given to such only as have robust constitutions. PARKINSON affirms that it is very efficacious in the cure of the Epilepsy ; but he unites with it in his prescription *Polypody of the Oak*, so that there is no knowing to which of the plants the merit of curing this stubborn disease is due.

The flowers or herb either bruised or made into an ointment, are strongly recommended in Schrophulous tumours and ulcers ; and so great an opinion have the Italians of its virtues as a vulnerary, that they have the following proverb concerning it. "*Aralda tutte le piaghe salda.*" Fox-glove cures all wounds. *Raii Hist. Plant.*

Digitalis purpurea.

DRABA VERNA. VERNAL DRABA OR WHITLOW GRAS

DRABA *Linnæi Gen. Pl.* TETRADYNAMIA SILICULOSA.

Raii Synop. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

DRABA *verna* ſcapis nudis, foliis ſubſerratis. *Linnæi Syſt. Vegetab. p.* 489. *Flor. Suec. p.* 223.

DRABA cauliculis nudis, foliis ſubhirſutis, ſubdentatis. *Haller. hiſt. helv.* 1. 215.

BURSA PASTORIS minor loculo oblongo. *Bauhin. pin.* 108. 2.

PARONYCHIA vulgaris. *Gerard emac.* 624. *Raii Syn.* 292: *Hudſon Fl. Angl.* 243. *Scopoli Flor. Carniol. n.* 79

RADIX fibroſa, annua.

CAULES nudi, palmares, 1 ad 5 aut plures in ſolo fertili ex eadem radice naſcuntur.

FOLIA ovato-lanceolata, baſi anguſtiora integra et ſubſerrata, (ſerra niſi unica aut duo, raro plures) ſuper terram expanſa, ſcabriuſcula, hirſuta, pili bi-trifurci.

PEDUNCULI alterni, uniflori.

CALYX: PERIANTHIUM tetraphyllum, foliolis erectis, concavis, gibbis, obtuſis, ſubhirſutis. *fig.* 1.

COROLLA tetrapetala, petala alba, calyce duplo longiora, bipartita. *fig.* 2.

STAMINA: FILAMENTA ſex incurvata, quorum 4 longitudine Piſtilli 2 breviora; ANTHERÆ flavæ. *fig.* 3. 4.

PISTILLUM: GERMEN ovatum, compreſſum; STYLUS vix ullus; STIGMA capitatum, planum. *fig.* 5.

PERICARPIUM: SILICULA ovata, compreſſa, brevi mucrone obtuſo terminata, bilocularis, bivalvis, valvulis plano-concavis: *fig.* 6.

SEMINA plura, ovata, fuſca, margini DISSEPIMENTI affixa. *fig.* 8. 9.

ROOT fibrous and annual.

STALKS naked, about three inches high, one to five and frequently more, if the ſoil be rich, ſpring from the ſame root.

LEAVES of an oval pointed ſhape, narrower at bottom, ſome of them entire, and others a little ſerrated or indented, (ſeldom more than one or two indentations in a leaf,) ſpreading on the ground, roughiſh, hirſute, ſome of the hairs bifurcate, others trifurcate.

PEDUNCLES alternate, uniflorous.

CALYX: a PERIANTHIUM of four leaves, which are upright, hollow, gibbous, obtuſe, and ſomewhat hairy, *fig.* 1.

COROLLA tetrapetalous, the PETALS white, twice the length of the Calyx, and bipartite, *fig.* 2.

STAMINA: ſix FILAMENTS which bend inward, 4 long the height of the Piſtillum, and 2 ſhort; the ANTHERÆ yellow, *fig.* 3. 4.

PISTILLUM: The GERMEN oval and flat; STYLE ſcarce any; STIGMA a ſmall head flat at top.

SEED-VESSEL a ſhort oval pod, flat, and terminated by a ſhort blunt point, having two Cavities and two Valves, the Valves ſlightly concave, *fig.* 6.

SEEDS ſeveral, oval, brown, fixed to the edge of the DISSEPIMENT or Partition, *fig.* 8. 9.

ON Walls, dry Banks, and in barren Fields, the white bloſſoms of this diminutive plant, are very conſpicuous in the months of March and April, a ſeaſon when any kind of bloſſom is viewed with pleaſure, as it cannot fail to excite the pleaſing reflection that the ſeaſon is approaching when

> " *All that is ſweet to ſmell, all that can charm*
> *Or eye or ear, burſts forth on every ſide*
> *And crouds upon the ſenſes.*"

Linnæus informs us that in Smoland a Province of Sweden, they ſow their Rye when this plant is in bloſſom, and that in the night time and in wet weather its flowers droop.

Galen ſays that *Paronychia* or *Whitlow Graſs* has its name from its properties, for it heals Whitlows; but Commentators are much in doubt concerning the plant itſelf. From the account of the Antients, it appears that it is a different plant from what we are now deſcribing; ſome have fixed on Wall Rue, (ASPLENIUM *Ruta muraria,*) others on a plant reſembling Spurge, ſuch is the confuſion that ariſes from imperfect deſcriptions.

Draba verna

Thlaspi Burſa Paſtoris.

1 2 3 4 5 6

THLASPI BURSA PASTORIS. SHEPHERD's PURSE.

THLASPI *Linnæi Gen. Pl.* TETRADYNAMIA SILICULOSA.

Silicula emarginata, obcordata, polyſperma: valvulis navicularibus, marginato-carinatis.

Raii Syn. Gen 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

THLASPI *Burſa paſtoris* filiculis obcordatis, foliis radicalibus pinnatifidis. *Linnæi Syſt. Vegetab. p.* 491. *Spec. Pl.* 903. *Fl. Suecic.* 227.

NASTURTIUM filiquis triangularibus, *Haller hiſt. v.* 1. *p.* 221

PASTORIA BURSA *Fuſchii icon.* 611.

BURSA PASTORIS major folio ſinuato. *Bauhin Pin.* 108. *Gerard emac.* 276. *Parkinſoni Theat.* 866. *Raii Syn.* 306. *Hudſon. Fl. Angl.* 247. *Scopoli. Fl. Carniol. v.* 2. 17.

RADIX annua, fibroſa, albida.

CAULIS pedalis, erectus, ramoſus, teres, ſubaſper.

FOLIA *radicalia* hirſutula, pinnatifida, laciniis quoad formam mire variantibus, *caulina* amplexicaulia, dentata.

PEDUNCULI uniflori, demum fere horizontales.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, ſubpiloſis, margine membranaceis, *fig.* 1.

COROLLA: PETALA quatuor alba, calyce paulo longiora, apice rotundata, *fig.* 2.

STAMINA: FILAMENTA ſex, alba, quorum quatuor longitudine Styli, duo breviora incurvata; ANTHERÆ flavæ, *fig.* 3.

PISTILLUM: GERMEN oblongo-cordatum; STYLUS breviſſimus; STIGMA villoſum, *fig.* 4.

PERICARPIUM: SILICULA lævis, *obcordata*, bivalvis, *fig.* 5.

SEMINA plurima, pedicellata, flaveſcentia, margini Diſſepimenti affixa, *fig.* 6.

DISSEPIMENTUM utrinque acutum Valvis contrarium.

ROOT annual, fibrous and whitiſh.

STALK about a foot high, upright, branched, round, a little prickly.

LEAVES: *radical leaves* ſlightly hirſute, pinnatifid, the laciniæ or jags varying exceedingly in their form; the upper leaves embracing the ſtalk, and indented at the edges.

PEDUNCLES, ſupporting one flower on each, nearly horizontal when the flowers are gone off.

CALYX: a PERIANTHIUM of four leaves, the leaves oval, hollow, ſlightly hairy, and membranous at the edges, *fig.* 1.

COROLLA: four white PETALS, a little longer than the Calyx, round at top, *fig.* 2.

STAMINA: ſix white FILAMENTS, four of which are of the ſame length as the Style; two are ſhorter and bent a little inwards; ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN of an oblong heart-ſhape; STYLE very ſhort; STIGMA villous, *fig.* 4.

SEED-VESSEL; a ſhort ſmooth pod, triangular or *heart-ſhaped*, with two valves, *fig.* 6.

SEEDS numerous, of a yellowiſh colour, ſtanding on little foot-ſtalks, which connects them to the edge of the Diſſepimentum or Partition, *fig.* 6.

PARTITION pointed at both ends, placed croſs-ways to the Valves.

THE radical leaves of this plant differ ſo exceedingly in their appearance, that the moſt expert Botaniſt is often obliged to have recourſe to its moſt ſtriking character, the ſhape of its Seed-veſſels, before he can with certainty diſtinguiſh it. When it grows on walls and in dry ſituations, the leaves are more deeply divided, and the Laciniæ become much narrower; in cultivated ground they are broader and leſs jagged: It differs likewiſe no leſs with repect to its ſize, ſometimes being not more than two or three inches high, and at other times as many feet.

March and *April* are the months in which it is found moſt generally in bloſſom, yet like the *Groundſel* and *Poa annua*, it may be found in this ſtate at almoſt any time of the year,

It acquires its name of *Shepherd's Pouch* or *Purſe*, from the particular ſhape of its pods, by which it is obviouſly diſtinguiſhed from all our other Tetradynamous plants.

The plant is collected and given to ſmall birds, who appear to be very fond of the ſeeds, and this is the only uſe to which we at preſent know of its being applied.

GERANIUM CICUTARIUM. HEMLOCK-LEAV'D CRANE'S-BILL.

GERANIUM *Linnæi Gen. Pl.* MONADELPHIA DECANDRIA.
Monogyna. *Stigmata* quinque. *Fructus* roſtratus, pentacoccus.

Raii Synop. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *cicutarium* pedunculis multifloris, floribus pentandris, foliis pinnatis inciſis obtuſis, caule ramoſo.
Linnæi Syſt. Vegetab. p. 90. *Fl. Suecic. p.* 243.

GERANIUM petiolis multifloris, caule procumbente, foliis duplicato-pinnatis, pinnulis acute inciſis.
Haller hiſt. No. 944.

GERANIUM cicutæ folio minus, et ſupinum. *Bauhin pin.* 319.

GERANIUM cicutæ folio inodorum album. *Gerard emac.* 945. 946.

GERANIUM moſchatum inodorum. *Parkinſon* 1708. *Raii Syn.* 357. Field Crane's-bill without ſcent.
Hudſon Fl. Angl. 262.

RADIX annua, albida, ſimplex, carne tenera, cum nervo intus duriore et tenaciore, paucis fibris inſtructa, craſſiuſcula, et in terram alte deſcendens.

CAULES ex eadem radice naſcuntur plures, craſſiuſculi, teretes, hirſuti, procumbentes, ramoſi, variæ longitudinis pro ratione loci.

FOLIA pinnata, pinnis ſeſſilibus pubeſcentibus, pinnulis acute inciſis.

STIPULÆ ad exortum foliorum membranaceæ, albidæ, ovato-acutæ, ſuperiore integra, *fig.* 1; inferiore in duas diviſæ, *fig.* 2.

PEDUNCULI axillares, alterni, hirſuti, multiflori, longitudine foliorum.

FLORES umbellati, roſei, a tribus ad ſex.

INVOLUCRUM membranaceum, multidentatum, *fig.* 3; PEDICELLI baſi craſſiores, deflexi et demum aſſurgentes.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, ſtriatis, hirſutis, concavis, mucronatis, *fig.* 4.

COROLLA: PETALA quinque, ſubovata, plana, ſubæqualia, roſea, baſi hirſuta, calyce longiora, *fig.* 5.

STAMINA: FILAMENTA decem, quorum quinque alterna Antheris carent *fig.* 7: ANTHERÆ ſaturate purpuraſcentes, *fig.* 6.

NECTARIA: *Glandulæ* quinque fuſcæ circa baſin ſtaminum locantur, *fig.* 9.

PISTILLUM: GERMEN quinquangulare, villoſum; STYLUS ſubulatus, ſulcatus; STIGMATA quinque purpuraſcentia, paululum reflexa, *fig.* 10, 11.

PERICARPIUM nullum; FRUCTUS pentacoccus, roſtratus.

SEMEN oblongum, læve, fuſcum, arillatum, *fig.* 14, ARILLA hirſuta; ARISTA prælonga piloſa inſtructa quæ demum ſpiralis evadit, *fig.* 12, 13.

ROOT annual, whitiſh, ſimple, tender, the ſtring or nerve in the middle of it hard and tough, furniſhed with few fibres, large for the ſize of the plant, and penetrating deep into the earth.

STALKS: ſeveral uſually ſpring from the ſame root, thickiſh, round, hirſute, procumbent and branched, of various lengths according to their place of growth.

LEAVES pinnated, the pinnæ ſeſſile and ſlightly hairy, the pinnulæ ſharply indented.

STIPULÆ at the baſe of the leaves membranous, whitiſh, acutely oval, the uppermoſt intire, *fig.* 1; the lowermoſt generally divided into two, *fig.* 2.

FOOT-STALKS of the flowers ſpringing from the baſe of the leaves, alternate, hirſute, the length of the leaves, and ſupporting many flowers.

FLOWERS growing in an Umbell, from three to ſix, of a roſe-colour.

INVOLUCRUM membranous, with many teeth, *fig.* 3; the ſmall foot-ſtalks of the flowers thickeſt at bottom, turning down, and laſtly turning upward.

CALYX: a PERIANTHIUM of five leaves, the folioli oval, ſtriated, hirſute, concave, and terminating in a fine point, *fig.* 4.

COROLLA: five PETALS, ſomewhat oval, flat, nearly equal, of a roſe colour, hairy at bottom, ſomewhat longer than the Calyx, *fig.* 5.

STAMINA: ten FILAMENTS, five of which want the Antheræ, the ANTHERÆ of a deep purple colour, *fig.* 6.

NECTARIA: five brown *Glands* placed round the baſe of the Stamina, *fig.* 9.

PISTILLUM: GERMEN quinquangular and villous, STYLE tapering and grooved; STIGMATA five, of a purple colour, bending a little back, *fig.* 10, 11.

SEED-VESSEL none; FRUIT as yet unripe, formed of five protuberating ſeeds, and terminating in a long beak.

SEED oblong, ſmooth, brown, incloſed within an ARILLUS, *fig.* 14, which is hirſute, and furniſhed with a long hairy ARISTA, finally becoming ſpiral, *fig.* 12, 13.

We have often had occaſion to remark the very great difference in the appearance of plants ariſing from ſoil and ſituation; of this the young Botaniſt cannot be too well appriſed, nor too often informed: from a want of attention to this circumſtance, the plant which we have now deſcribed, has been divided by different Authors into ſeveral ſpecies.

It ſeems worthy of notice, that the alterations which are produced in plants from growing in a richer ſoil, are chiefly thoſe of encreaſe of ſize, and a multiplication of their parts; the minutiæ of the fructification ſuffer but little change in their form by culture, hence they are often moſt to be depended on, even in aſcertaining different ſpecies.

When the *Geranium Cicutarium* grows on a dry ſandy bank, or wall, as it very frequently does, it is quite diminutive; when it occurs in a moiſter and more luxuriant ſoil, the branches extend often a foot or two in length, and the whole plant becomes ſo altered in its general appearance, as readily to deceive the inexperienc'd Tyro; but the long pointed fruit which occurs in both, and from whence this plant has obtained the name of *Cranes-bill*, readily points them out to be the ſame.

The ſeeds of the Geraniums are, in general, encloſed within a membranous *Arillus*, which terminates in an *Ariſta* or *Tail*, of different lengths in different ſpecies; in ſome of them, when the ſeeds are become ripe, they detach themſelves from the receptacle, to which they are affixed, with conſiderable elaſticity, and the ſeeds being looſely contained within the *Arillus*, are thrown out to a conſiderable diſtance. In the preſent ſpecies, the ſeeds are more cloſely inveſted by the *Arillus*, which does not ſeparate itſelf with ſo much force, and as ſoon as detached, the *Ariſta* begins to be twiſted up in a ſpiral form. This may be very diſtinctly obſerved if we ſeparate a ſeed, with its *Arillus*, as ſoon as ripe, and place it in the palm of the hand, the tail of the *Arillus* immediately appears in motion, as if endued with ſome ſenſitive property, and continues uninterruptedly this motion, 'till it has aſſumed the form of a ſcrew, *vid. fig.* 13. The ſeed thus furniſhed with its twiſted Ariſta, is more liable to attach itſelf to any thing which may come in contact with it, by which means this plant is more univerſally diſſeminated.

The *Geranium moſchatum* has a great affinity with this ſpecies, that plant however has a ſtrong ſmell of muſk, which this entirely wants; and has alſo many other peculiarities, which we ſhall not fail to particularize when it comes to be treated of.

Geranium cicutarium.

GERANIUM ROBERTIANUM. STRONG-SCENTED CRANES-BILL, OR HERB ROBERT.

GERANIUM *Linnæi Gen. Pl.* MONADELPHIA DECANDRIA.

Stigmata quinque. *Fructus* roſtratus, pentacoccus.

Raii Syn. 335. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *robertianum* pedunculis bifloris, calycibus piloſis decemangulatis. *Linnæi Syſt. Vegetab.* 515. *Fl. Suecic.* 241. *n.* 619.

GERANIUM foliis duplicato pinnatis, pinnis ultimis confluentibus, calycibus ſtriatis, hirſutis. *Hall. hiſt. n.* 943.

GERANIUM *robertianum. Scopoli Fl. Carniol. n.* 845. *Hudſon Fl. Angl. p.* 264.

GERANIUM *robertianum* primum. *Bauhin. Pin.* 319.

GERANIUM *robertianum. Gerard. emac.* 939.

GERANIUM *robertianum* vulgare. *Parkinſon* 710. *Raii Syn. p.* 358.

RADIX annua, fuſca, fibris ramoſis prælongis inſtructa.

CAULES plures, diffuſi, ramoſi, ſanguinei ut ut tota planta haud infrequenter, geniculis tumidis, piloſi, præſertim in junioribus plantis.

FOLIA oppoſita, piloſa, præcipue in umbroſis, unumquodque folium e tribus foliolis pinnatifidis baſi confluentibus componitur, foliolo medio longius pedicellato, laciniis ſpinula rubra terminatis.

STIPULÆ ad ſingulum geniculum quatuor, utrinque binæ.

PEDUNCULI biflori.

CALYX: PERIANTHIUM decemangulatum, perſiſtens, foliolis ovato-lanceolatis, nervoſis, hirſutis, mucronatis, *fig.* 1, 2.

COROLLA: PETALA quinque roſea, patentia, æqualia, lamina ſubcordata, unguis linearis, medio prominulo ſulcato in tres nervos albidos divaricante. *fig.* 3.

STAMINA: FILAMENTA decem fertilia, ſubulata, plana, alba, baſi cohærentia; ANTHERÆ purpuraſcentes, polline flavo repletæ, *fig.* 4, auct 5.

PISTILLUM: GERMEN quinquangulare; STYLUS ſubulatus, villoſus; STIGMATA quinque, rubra, paululum reflexa, *fig.* 6.

SEMINA quinque Arillata, lævia, ovata, fuſca ad unum latus compreſſa, *fig.* 9; ARILLUS rugoſus, *fig.* 7, 8.

ROOT annual, brown, furniſhed with long branched fibres.

STALKS ſeveral, ſpreading, branched, of a blood-red colour, as is frequently the whole plant, (the joints tumid,) hairy, particularly in the young plants.

LEAVES oppoſite, hairy eſpecially when growing in the ſhade, each compoſed of three pinnatifid leaves, uniting at the baſe, the middle leaf ſtanding on the longeſt foot-ſtalk, the laciniæ or jags of the leaf terminated by a ſmall red ſpine.

STIPULÆ four at each joint, two on each ſide of it.

PEDUNCLES biflorous.

CALYX: a PERIANTHIUM having ten angles, and continuing, the leaves ovato-lanceolate, nervous, hairy, terminating in a point, *fig.* 1, 2.

COROLLA: five roſe-coloured PETALS, ſpreading and equal, the lamina ſomewhat heart-ſhaped, the claw linear, the middle part of it prominent, grooved, and ſpreading into three whitiſh nerves.

STAMINA: ten fertile FILAMENTS, tapering, flat, white, connected at bottom; ANTHERÆ purpliſh, filled with a yellow Pollen, *fig.* 4, magnified, *fig.* 5.

PISTILLUM: GERMEN having five angles; STYLE tapering, villous; STIGMATA five, red, a little turned back, *fig.* 6.

SEEDS five, contained within an Arillus, ſmooth, oval, brown, flattened on one ſide, *fig.* 9; the ARILLUS wrinkled, *fig.* 7, 8.

Although our Engliſh *Geraniums* cannot boaſt that grandeur and variety of ſplendid colours ſo conſpicuous in many of the foreign ones, yet ſeveral of them are ſufficiently beautiful to be entitled to a place in the gardens of the curious, particularly the *Bloody Cranes-bill, (Geranium Sanguineum;)* the *Crowfoot Cranes-bill, (Geranium Pratenſe;)* the *Perennial Doves-foot Cranes-bill, (Geranium Perenne of Hudſon,)* and the *Herb Robert* which we have now deſcribed: the latter of theſe grows naturally in woods, but more particularly under the hedges which ſurround woods; it likewiſe is frequently found in old hollow trees, and not uncommonly on the roofs of houſes not much expoſed to the ſun: it is an annual plant; the ſeeds ſow themſelves in Autumn, ſoon after the young plants come up; flower the enſuing ſpring, and continue to bloſſom the whole Summer long, if the plant grows in the ſhade: towards the latter end of the year, both ſtalks and leaves become of a deep red or blood colour.

The whole plant has a diſagreeable ſmell when bruiſed, by which it will be diſtinguiſhed from our other ſpecies. It appears to grow all over Europe, and as a proof of its being ſtill more univerſal, LINNÆUS mentions its growing in *Arabia fœlix.*

A variety with a white flower now and then ocurrs.

If credit may be given to writers on the *Materia Medica*, it is a plant of conſiderable efficacy in medicine, particularly as an Aſtringent, hence it is recommended in all kinds of Hemorrhages; and thoſe who have the management of cattle, are ſaid to give them an infuſion of this plant when they make bloody urine.—Has not this practice originated from the doctrine of ſignatures? It is alſo celebrated as a vulnerary in ſchrophulous, cancerous and putrid Ulcers, to which either the juice is applied, or the parts fomented with a decoction of the herb; as likewiſe in Contuſions, diſſolving the extravaſated blood when applied in the form of a Cataplaſm; and laſtly it is ſaid to be exhibited with good ſucceſs in the Stone and Gravel.—How far it merits theſe encomiums future experiments muſt determine.

The herb bruiſed and applied to places infeſted with Bugs, is ſaid by LINNÆUS to drive them away.

Geranium robertianum.

OROBUS TUBEROSUS. WOOD PEA.

OROBUS *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Raii Synop. Gen. 23. HERBÆ FLORE PAPILIONACEO, SEU LEGUMINOSÆ.

OROBUS *tuberoſus* foliis pinnatis, lanceolatis; ſtipulis ſemiſagittatis integerrimis, caule ſimplici. *Lin. Syſt. Vegetab. p.* 550. *Fl. Suecic. n.* 642.

OROBUS caule ſimplici; foliis ſenis ellipticis; radice tuberoſa. *Haller. hiſt. n.* 417.

ASTRAGALUS ſylvaticus, foliis oblongis glabris. *Bauhin. pin.* 351. *Gerard. emac.* 1237.

LATHYRUS ſylveſtris lignoſior. *Parkinſon*, 1072. *Raii Synop. p.* 324. Wood-Peaſe, or Heath-Peaſe. *Hudſon, Fl. Angl. p.* 274. *Scopoli. Fl. Carn. n.* 883.

RADIX perennis, tuberoſa.

CAULIS ſimplex, erectus, pedalis, alatus, ſubtortuoſus.

FOLIA pinnata, CIRRHO brevi recto terminata, Pinnarum paria duo, tria, elliptica, mucronata, glabra ſubtus cæruleſcentia.

STIPULÆ ſemiſagittatæ, ſæpe integræ, ſæpius vero ad baſin hamatæ, dente unico aut pluribus.

RAMI florigeri, 1, 2, 3, aut plures ex foliorum alis, primum nutantes, FLORES pulchelli, ex rubro purpurei, demum cæruleſcentes.

CALYX PERIANTHIUM monophyllum, tubulatum, purpureum, baſi obtuſum; ore quinquedentato, denticulis tribus inferioribus acutioribus, duobus ſuperioribus brevioribus, obtuſe diviſis, ſubaſſurgentibus, *fig.* 1.

COROLLA *Papilionacea:* VEXILLUM obcordatum, reflexum, *fig.* 2. ALÆ conniventes, Carinâ connexæ, Unguis linearis, *fig.* 5. Lamina obtuſa. CARINA, *fig.* 7, acuminata, aſſurgens, marginibus cavis ad Alas recipiendas, *fig.* 9.

STAMINA: FILAMENTA diadelphia (ſimplex et novem fidum) adſcendentia, *fig.* 11, 17. ANTHERÆ flavæ, *fig.* 12. ad baſin filamenti ſimplicis et ſuperioris, foramina duo obſervantur, *fig.* 16.

PISTILLUM: GERMEN cylindraceum, compreſſum, STYLUS filiformis, erectus, lateri interiori prope apicem villoſus, *fig.* 13.

PERICARPIUM LEGUMEN teres, longum, primum rubrum, demum nigrum, *fig.* 14.

SEMINA plura, ſubrotunda, e luteo-fuſca, *fig.* 15.

ROOT perennial and tuberous.

STALK ſimple, upright, about a foot high, winged and ſomewhat twiſted.

LEAVES pinnated, terminated by a ſhort ſtrait CIRRHUS conſiſting of two or three pair of Pinnæ which are elliptical, and end in a ſmall ſharp point, ſmooth and underneath blueiſh.

STIPULÆ ſemiſagittate, frequently entire but more often jagged at bottom, with one or ſeveral teeth.

BRANCHES which ſuſtain the flowers 1, 2, 3, or more, ſpringing from the boſom of the leaves, at firſt drooping the FLOWERS beautiful, of a reddiſh purple colour, becoming blue as they go off.

CALYX: a PERIANTHIUM of one leaf, tubular, purple, blunt at bottom, the mouth quinquedentate, the three lowermoſt teeth ſharpeſt, the two uppermoſt ſhorteſt, bluntly divided, and turned a little upwards, *fig* 1.

COROLLA *Papilionaceous:* the VEXILLUM heart-ſhaped, turning back, *fig.* 2. the WINGS connivent and connected with the Carina, the Claw linear, *fig.* 5. the Lamina obtuſe, *fig.* 6. the CARINA or Keel acuminate, riſing upward, the edges hollow for the reception of the Alæ or Wings, *fig.* 9.

STAMINA: ten FILAMENTS, nine united into one body below, and one ſeparate at top, *fig.* 11, 17. riſing upward, ANTHERÆ yellow, *fig.* 12. at the baſe of the ſimple and uppermoſt filament two ſmall holes are conſpicuous, *fig.* 16.

PISTILLUM: GERMEN cylindrical, and flattiſh, STYLE thread-ſhaped, interiorly near the tip villous, *fig.* 13.

SEED-VESSEL, a LEGUMEN round, and long, firſt red, when ripe black, *fig.* 14.

SEEDS ſeveral, roundiſh, of a yellowiſh brown colour, *fig.* 15.

This elegant ſpecies of Orobus grows very plentifully in all our Woods about Town; it ſeems to delight in a ſtrong clayey ſoil. It produces its bloſſoms in May and June and the ſeed is ripe in July. The root is large and tuberous, deeply ſituated in the Earth and taken up with difficulty; it is not made any particular uſe of with us, but is conſiderably eſteemed in ſome parts of Great Britain.

My very worthy and ingenious Friend the *Rev. Mr. Lightfoot*, of *Uxbridge*, has favoured me with the following account of its uſes, which he obſerved in his late tour through Scotland:

"The *Orobus tuberoſus* is very common in *Scotland*, both in the *Lowlands*, *Highlands*, and the *Hebrides*. It is called "in the Erſe Language *Cor-meille*. The Highlanders dig up the Roots and dry them in their pockets, and chew "them like Tobacco or Liquorice Root, to reliſh their Liquor, and to repel Hunger and Thirſt. In *Breadalbane* "and *Roſs-ſhire* they ſometimes ſteep them in Water, and make an agreeable fermented Liquor with them, which "they eſteem to be good for Diſorders of the Thorax. It has a ſweetiſh Taſte ſomewhat like Liquorice Roots. Fond "as the Highlanders were of this Root they frequently uſed to change it with me for ſome Pig-tail Tobacco, their "favourite Indulgence."

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Orobus tuberosus

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Ervum hirsutum.

ERVUM HIRSUTUM. ROUGH-PODDED TINE-TARE.

ERVUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA. Calyx quinquepartitus, longitudine corollæ.

Raii Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

ERVUM *hirſutum*, pedunculis multifloris, ſeminibus globoſis binis. *Linn. Syſt. Vegetab. p.* 554. *Spec. Plant.* 1039. *Fl. Suecic.* 255.

VICIA foliis linearibus, ſiliquis racemoſis, diſpermis, hirſutis. *Haller hiſt. helv. n.* 422.

ERVUM *hirſutum. Scopoli Fl. Carniol n.* 901. *Hudſon Fl. Angl. p.* 280.

VICIA ſegetum cum ſiliquis plurimis hirſutis. *Bauhin. Pin. p.* 345.

VICIA ſylveſtris ſeu Cracca minima. *Gerard. emac.* 1028.

ARACHUS ſive Cracca minor. *Parkinſon* 1070. *Raii Syn.* ſmall wild Tare or Tine Tare. *Muller. Flor. Dan. icon.* 639.

RADIX annua, tenuis, prælonga, paucis fibrillis inſtructa.

CAULES pedales, aut bipedales, debiles, ramoſi, quadrangulares, tortuoſi.

STIPULÆ in plures lacinias tenues diviſæ, ſuperiore majore.

FOLIA pinnata, ad octo aut duodecem paria, oppoſita, aut ſubalterna, lævia, lanceolata, *apice truncata, nervo medio in mucronem educto*, capreolo ramoſo terminata.

PEDUNCULI longitudine foliorum, *multiflori.*

FLORES a tribus ad octo, pallide purpurei, racematim, et imbricatim diſpoſiti.

CALYX: PERIANTHIUM quinquedentatum, perſiſtens, longitudine fere Corollæ, dentibus linearibus, acuminatis, ſubæqualibus, duobus ſuperioribus more Orobi obtuſe diviſis, *fig.* 1.

COROLLA papilionacea; VEXILLUM ſubrotundum, vix emarginatum, parum reflexum, *fig.* 2; ALÆ Carinæ adhærentes, ovatæ, obtuſæ, ad baſin lineares, *fig.* 3; CARINA alis brevior, *fig.* 4, *interne maculâ purpurea utrinque notata.*

STAMINA: FILAMENTA decem aſſurgentia, ſupremum brevior cæteris, nec liberum, *fig.* 5; ANTHERÆ ſimplices, flavæ.

PISTILLUM: GERMEN oblongum, STYLUS ſimplex, aſſurgens, STIGMA obtuſum, villoſum, *fig.* 6.

PERICARPIUM: LEGUMEN breve, *hirſutum, diſpermum, fig.* 7.

SEMINA duo, ſubrotunda.

ROOT annual, ſlender, long, and furniſhed with few fibres.

STALKS from one to two feet high, weak, branched, quadrangular and twiſted.

STIPULÆ divided into many ſlender laciniæ, of which the uppermoſt is the largeſt.

LEAVES pinnated, from eight to twelve pair, oppoſite, or nearly alternate, ſmooth, lanceolate, with the *top cut off*, and the *midrib running out to a ſhort point*, terminated by a branched tendril.

PEDUNCLES the length of the leaves, and ſupporting many flowers.

FLOWERS from three to eight, of a pale purple colour, diſpoſed in racemi, and laying one over another.

CALYX: a PERIANTHIUM with five teeth, continuing, almoſt the length of the Corolla, the teeth linear, and pointed, nearly equal, the two upper ones obtuſely divided in the manner of the Orobus, *fig.* 1.

COROLLA papilionaceous; the VEXILLUM roundiſh, ſcarcely nicked in, bending a little back, *fig.* 2; the WINGS adhering to the Carina, oval, obtuſe, at bottom linear, *fig.* 3; the CARINA ſhorter than the Wings, *fig.* 4, *marked internally on each ſide with a purple ſpot.*

STAMINA: ten FILAMENTS which riſe upward, the uppermoſt connected with, and ſhorter than the others, *fig.* 5; the ANTHERÆ ſimple and yellow.

PISTILLUM: GERMEN oblong, STYLE ſimple and riſing upward, STIGMA blunt and villous, *fig.* 6.

SEED-VESSEL a ſhort *hairy* LEGUMEN with *two ſeeds*, *fig.* 7.

SEEDS two, and roundiſh.

This ſpecies of Tine-Tare, which at firſt ſight bears ſo great a reſemblance to the *Ervum tetraſpermum*, grows like that, too frequently among Corn, to which it is in general more deſtructive, as being a ſtronger and more prolific plant. I have in wet ſeaſons ſeen whole fields of corn overpower'd and wholly deſtroyed by this plant.

It is eaſily diſtinguiſhed from the *Tetraſpermum*; in the firſt place, the leaves are not pointed as in that ſpecies, but appear as if cut off at the end, which although a material circumſtance is not noticed by MULLER in his figure of it, *vid. Fl. Dan. icon.* 639; ſecondly the Stipulæ are divided into many more laciniæ; the flowers and conſequently the Pods grow in a kind of Cluſter, whereas there is ſeldom more than two grow together in the *Tetraſpermum*; and laſtly, which ſeems to be the beſt diſtinction, the Pods are rough and contain two Seeds in each, while in the *Tetraſpermum*, they are ſmooth and contain four Seeds.

ERVUM TETRASPERMUM. SMOOTH-PODDED TINE TARE.

ERVUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

ERVUM *(tetraſpermum)* pedunculis ſubbifloris, ſeminibus globoſis quaternis. *Linn. Syſt. Vegetab. p.* 554.

VICIA foliis linearibus, ſiliquis gemellis glabris. *Haller hiſt. v.* 1. *p.* 184.

ERVUM *tetraſpermum. Scopoli Fl. Carniol.* DIAGN. Pedunculi ſubbiflori. Siliqua glabra, obtuſa, tetraſperma.

VICIA ſegetum ſingularibus ſiliquis glabris. *Bauhin Pin. p.* 345.

VICIÆ ſive Craccæ minimæ ſpecies cum ſiliquis glabris. *I. Bauhin.*

CRACCA minor ſiliquis ſingularibus, floſculis cœruleſcentibus. *Hoff. C. H. Alt. Raii Syn. p.* 322. Tine-Tare with ſmooth pods. *Hudſon Fl. Angl p.* 280. *OEder Fl. Dan. Icon.* 95.

RADIX annua, fibroſa.

CAULES in apertis locis læves, tenues, debiles, inter ſegetes vero, (ubi ſæpius invenitur) capreolis erecte ſeſe ſuſtentant, pedales et ultra.

STIPULÆ ad baſin foliorum, duo, ſimplices, utrinque acuminatæ.

FOLIA pinnata, lævia, lanceolata-linearia, parium trium ad quinque uſque, capreolo ramoſo terminata.

PEDUNCULI longitudine foliorum, plerumque biflori.

CALYX PERIANTHIUM quinquedentatum, perſiſtens, dentibus inæqualibus, acutis, duobus ſuperioribus brevioribus, latioribus, ſurſum tendentibus, obtuſe diviſis, *fig.* 1.

COROLLA papilionacea, *fig.* 2; VEXILLUM ſubemarginatum, limbus reflexus, venis purpureis pictus, *fig.* 4; ALÆ albæ, conniventes, *fig.* 5; CARINA alis brevior, obtuſa, *fig.* 6.

STAMINA: FILAMENTA diadelpha (ſimplex et novemfidum) aſſurgentia, *fig.* 7, 8, ſupremum liberum, *fig.* 8; ANTHERÆ ſimplices.

PISTILLUM: GERMEN compreſſum; STYLUS aſſurgens; STIGMA capitatum, villoſum, *fig.* 9.

PERICARPIUM: LEGUMEN *læve*, teretiuſculum, *tetraſpermum*, *fig.* 10.

SEMINA ſubrotunda, fuſceſcentia, nigro marmoreata, *fig.* 11.

ROOT annual and fibrous.

STALKS in open places are ſlender and weak, but among the Corn, (where this plant is moſt commonly found,) they ſupport themſelves upright by means of their tendrils, and grow to a foot or more in height.

STIPULÆ at the bottom of the leaves, two, ſimple, and pointed at each end.

LEAVES pinnated, ſmooth, lanceolate and linear, from three to five pair, terminated by a branched tendril.

PEDUNCLES the length of the leaves, generally ſuſtaining two flowers.

CALYX a PERIANTHIUM having five teeth and continuing, the teeth unequal and pointed, the two uppermoſt ſhorteſt, broadeſt, and turning a little upwards, at bottom obtuſely divided, *fig.* 1.

COROLLA papilionaceous, *fig.* 2; the VEXILLUM ſlightly nicked in at top, the limb ſomewhat turned back and ſtreaked with purple. *fig.* 4; the ALÆ white and cloſing together, *fig.* 5; the CARINA ſhorter than the Alæ and obtuſe *fig.* 6.

STAMINA: Ten FILAMENTS uniting into two bodies, of which one forms the lowermoſt, *fig.* 7, and one the uppermoſt which is free, *fig.* 8; ANTHERÆ ſimple.

PISTILLUM: GERMEN flatten'd; STYLE riſing upward; STIGMA forming a little head and villous, *fig.* 9.

SEED-VESSEL: a LEGUMEN, *ſmooth*, roundiſh, and *containing four ſeeds*, *fig.* 10.

SEEDS nearly round, browniſh and mottled with black, *fig.* 11.

This ſpecies of *Ervum* or *Tine-Tare* is found in moſt Corn-fields, often to the Farmers ſorrow, as it frequently proves very injurious to the Corn, laying hold of it by means of its tendrils, and if the ſeaſon favours its growth quite overcoming it. Like moſt plants of this kind it is exceedingly fertile; on one plant which I caſually pulled up, I counted 220 pods, and as each pod contains four ſeeds, there muſt have been from a ſingle ſeed the amazing produce of 880.

At firſt ſight this ſpecies has a conſiderable reſemblance to the *Ervum hirſutum*, but the ſlighteſt attention will diſcover the difference; in the *Ervum hirſutum* the pods contain only *two ſeeds* and are *hairy*; in the *Tetraſpermum* they contain *four* and are *ſmooth*; in the *hirſutum* the flowers grow in a kind of *cluſter*, in *this ſpecies* there is ſeldom more than *two* grow together.

The figure which I have given is intended to repreſent the plant as it grows among the Corn; when it is found by itſelf and in a poor ſoil it is often not ſo large.

Ervum tetraspermum

HYPERICUM PULCHRUM. Small Upright St. JOHN's WORT.

HYPERICUM *Linnæi Gen. Pl.* POLYADELPHIA POLYANDRIA.

Raii Synop. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM floribus trigynis; calycibus ſerrato-glandulosis, caule tereti, foliis perfoliatis glabris. *Lin. Sp. Pl.* 1106.

HYPERICUM pulchrum Tragi. *J. Bauhin. Hiſt.* III. 183. *Raii Synop.* 342.

HYPERICUM minus, erectum. *Bauhin. Pin.* 279.

HYPERICUM foliis amplexicaulibus, cordatis, calycibus ovatis, ſerratis, glanduligeris. *Haller. Hiſt. n.* 1041.

Gerard. emac. 540. *Hudſon. Fl. Angl.* 290. *Oeder. Flor. Dan. Icon.* 75.

RADIX perennis.

CAULIS pedalis ad bipedalem, erectus, *teres*, *fig.* 1. glaber, ſubramoſus, geniculi diſtantes.

RAMI oppoſiti, breves, tenues, cauli ſimiles.

PEDUNCULI teretes, plerumque triflori.

FOLIA CAULIS *cordato-triangularia*, *glaberrima*, *amplexicaulia*, ſaturate viridia, patentia, quam in cæteris Hypericis ſolidiora, verſus marginem perforata, inferiora frequenter coccinea, RAMORUM ovata, caulis triplo minora, PEDUNCULORUM ovato-lanceolata.

CALYX. PERIANTHIUM quinquepartitum, LACINIIS ovatis, acutis, ſtriatis, margine ſerratis, *dentibus glanduliferis*, glandulis nigro rufis, *fig.* 2.

COROLLA. PETALA quinque, oblongo-ovata, flava, contorta, leviter ſtriata, ſubtus aurantiaco lineata, margine ſubſerrata et glandulis cincta, *fig.* 3.

STAMINA FILAMENTA triginta ſex, filiformia, in tres faſciculos ad baſin coalita, in ſingulo faſciculo duodecim; ANTHERÆ biloculares, ſubrotundæ. POLLEN *miniaceum*, *fig.* 4.

PISTILLUM. GERMEN ovatum, STYLI tres, longitudine germinis, divaricantes, STIGMATA parva, ſubrotunda, *fig.* 5.

PERICARPIUM. CAPSULA ſubconica, trilocularis, fuſca, *fig.* 6, 7.

SEMINA plurima, oblonga, fuſca, *fig.* 8.

ROOT perennial.

STALK from one to two feet high, upright, round, *fig.* 1. ſmooth, and thinly branched, the joints remote from each other.

BRANCHES oppoſite, ſhort, ſlender and like the ſtalk.

PEDUNCLES round, generally ſuſtaining three flowers.

LEAVES of the STALK *triangularly heart-ſhaped, ſmooth, ſhining, embracing the ſtalk*, nearly horizontal, of a deep green colour, more ſolid to the touch than the other St. John's Worts, perforated near the edge, and frequently of a bright red colour towards the bottom, thoſe of the BRANCHES oval, three times ſmaller than thoſe on the Stalk, and thoſe of the PEDUNCLES lancet-ſhaped.

CALYX. A PERIANTHIUM divided into five Segments, the SEGMENTS oval, pointed, ſtriated, ſerrated and, *edged with little glands* of a blackiſh red colour, *fig.* 2.

COROLLA. Five PETALS, oblong, oval, yellow, ſlightly ſtriated; on the under ſide tinged with a bright orange, ſlightly ſerrated, and edged with glands, *fig.* 3.

STAMINA. The FILAMENTS numerous, to thirty-ſix, filiform, uniting at bottom in three Faſciculi or Bundles, in each Faſciculus 12; the ANTHERÆ roundiſh and bilocular, *fig.* 4. The POLLEN *bright ſcarlet.*

PISTILLUM. The GERMEN oval, three STYLES the length of the Germen, ſpreading, the STIGMATA ſmall and roundiſh, *fig.* 5.

SEED-VESSELL a CAPSULE ſomewhat conical, of a brown colour, with three cavities, *fig.* 6, 7.

SEEDS numerous, oblong and brown, *fig.* 8.

THE antient Botaniſts gave this Plant the name of PULCHRUM, from its beauty; and LINNÆUS has very properly continued it;—many will, no doubt, think it deſerving of a place in their gardens, it is fond of a clayey ſoil, and woody ſituation, and is found in all the woods about town, as HORNSEY WOOD beyond *Iſlington*, OAK OF HONOUR WOOD, (as it is generally called) a little beyond *Peckham*; CHARLTON-WOOD by *Greenwich*, likewiſe on HOUNSLOW-HEATH; it flowers in the month of *July*, and continues but a ſhort time in bloſſom.

Its virtues as a medicine are probably the ſame with the common *St. John's Wort.*

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Hypericum pulchrum.
Kilburn pinx.t et sculp.t

Hypericum Perforatum.

HYPERICUM PERFORATUM. COMMON St. JOHN's WORT.

HYPERICUM *Linnæi Gen. Pl.* POLYADELPHIA POLYANDRIA.

Raii Synopſis Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM *perforatum*, floribus trigynis, caule ancipiti, foliis obtuſis pellucido-punctatis. *Linnæi Syſt. Vegetab. p.* 584. *Fl. Suecic. n.* 680.

HYPERICUM caule terete, alato, ramoſiſſimo; foliis ovatis, perforatis. *Haller. hiſt. vol. 2. p.* 4.

HYPERICUM vulgare *Bauhin. Pin. p.* 279. *Gerard. emac.* 540. *Parkinſon* 572. *Raii Synop.* 342. *Hudſon Fl. Angl.* 290. *Scopoli. Fl. Carniol. n.* 944,

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Tota planta glandulis nigris adſperſa.

The whole plant is ſprinkled over with ſmall black glands.

RADIX perennis, lignoſa, fuſca.

ROOT perennial, woody, of a brown colour.

CAULES plerumque plures ex eadem radice, bipedales, erecti, ſublignoſi, *læves, teretes, alternè ancipites fig.* 1, ramoſi.

STALKS ſeveral for the moſt part, ſpringing from the ſame root, about two feet high, upright, woody, *ſmooth, round, alternately two edged, fig.* 1, much branched.

RAMI oppoſiti, ſuberecti, ancipites.

BRANCHES oppoſite, nearly upright, two edged.

FOLIA oppoſita, ſeſſilia, ovato-oblonga, obtuſa, perforata five pellucido-punctata, heptanervia ex luteo-viridia. *fig.* 2.

LEAVES oppoſite, ſeſſile, of an oblong oval ſhape, obtuſe, having the appearance of being all over perforated, of a yellowiſh green colour, with ſeven nerves or ribs, *fig.* 2

PEDUNCULI ancipites, multiflori.

PEDUNCLES two edged, ſupporting many flowers.

PANICULA denſa.

PANICLE buſhy.

CALYX: PERIANTHIUM quinquepartitum, ſtriatum, laciniis *lanceolatis, acuminatis, nudis. fig.* 3.

CALYX A PERIANTHIUM divided into five ſegments, and ſtriated, the ſegments *narrow and pointed, without any glands on them. fig.* 3.

COROLLA: petala quinque, flava, ad unum latus crenulata, glandulis nigris adſperſa. *fig.* 4.

COROLLA: five PETALS of a yellow colour, notched irregularly on one ſide, and ſprinkled over with little black glands. *fig.* 4.

STAMINA: FILAMENTA plurima, in tria corpora vix coalita. *fig.* 5. ANTHERÆ flavæ, biloculares, loculis ſubrotundis, inter quos *glandula nigra* ponitur. *fig.* 6.

STAMINA: FILAMENTS numerous, uniting at bottom in three ſcarcely diſtinct bodies or faſciculi *fig.* 5. ANTHERÆ yellow and bilocular, each of the Cavities of a roundiſh figure, and between them is ſituated *a ſmall black gland. fig.* 6.

PISTILLUM: GERMEN ſubovatum, STYLI tres divaricantes: STIGMATA ſimplicia. *fig.* 7.

PISTILLUM: GERMEN ſomewhat oval, three STYLES which divaricate; the STIGMATA ſimple, *fig.* 7.

PERICARPIUM: CAPSULA ſubtrigona *fig.* 8. trilocularis *fig.* 9. pallide fuſca.

SEED-VESSEL: a CAPSULE ſomewhat triangular, *fig.* 8, of a pale brown colour, with three Cavities, *fig.* 9.

RECEPTACULUM ſeu Thalamus ſeminum foramine triquetro gaudet, quod in pericarpii immaturi ſectione tranſverſa clare diſtingui poteſt, ut obſervavit Cl. Scopoli.

RECEPTACLE: the Receptacle which is continued through the Capſule, and connects the Cavities together, has a triangular hole in it, which is very obvious in a tranſverſe ſection of it before it is ripe,—as the celebrated *Scopoli* has juſtly obſerved.

SEMINA plurima, oblonga, fuſca. *fig.* 10. 11.

SEEDS numerous, oblong, and brown, *fig.* 10. 11.

It very often happens, that ſome of the minute parts of the Flower, and Seed, afford a more obvious, certain, and conſtant mark of ſpecific difference, than any part of the plant beſides, and we have a remarkable inſtance of the truth of this obſervation in the plant before us. A little gland, of a black colour, placed on the ſummit of the Anthera, at one view diſtinguiſhes this ſpecies, without any farther inveſtigation: did ſuch obvious diſtinctions prevail in all plants, a knowledge of them might with much eaſe be acquired; and fortunately we ſhall find, on examination, ſuch marks more frequently occur than is generally imagined; whenever they do, we ſhall not fail to remark them.

The apparent perforation of the leaves, from whence this ſpecies is named, is not peculiar to it alone.

Although in the preſent practice this officinal plant does not ſeem to be much regarded, yet its ſenſible qualities, and the repeated teſtimonies of its virtues, entitle it as Dr. Cullen * obſerves to farther trials. To the taſte it is aſtringent and bitter, and its effects ſeem to be chiefly diuretic. From poſſeſſing properties which have generally been called balſamic, it has been uſed as a vulnerary in external wounds, and internal hemorrhages, for the former purpoſe, the tops of the plant with the flowers are infuſed in oil, and for the latter, an infuſion of the plant is made in the manner of Tea. It has likewiſe been given in ulcerations of the kidnies, and has even been ſuppoſed to poſſeſs virtues as a febrifuge.

It has had the ill fate to be abuſed by the ſuperſtition of the common people in France and Germany, who gather it with great ceremony on St. John's Day, and hang it in their Windows, as a certain charm and defence againſt Storms Thunder, and evil Spirits; miſtaking the meaning of ſome medical writers, who have fancifully given this plant the name of *Fuga Dæmonum* becauſe they ſuppoſed, if given internally, it was a good medicine for maniacal and hypochondriacal Diſorders.

The dried plant boiled with Allum dyes Wool of a yellow colour. It grows very common in hedges and fields that are but ſeldom tilled, and flowers in Auguſt and September.

*Vid. Dr. Cullen's Materia Medica p. 206.

4·6

Leontodon Taraxacum.

Kilburn pinxt et fecit

LEONTODON *TARAXACUM.* DANDELION.

LEONTODON *Linnæi Gen. Pl.* SYNGENESIA. POLYGAMIA ÆQUALIS.
Raii Synopſis ed. 3. *Gen.* 6. HERBÆ FLORE COMPOSITO, NATURÆ PLENO LACTESCENTES.

LEONTODON *Taraxacum* calycis ſquamis inferne reflexis, foliis runcinatis denticulatis lævibus. *Linnæi Syſt. Vegetab. p.* 596. *Sp. Plant* 1122. *Fl. Suecic.* 270.

TARAXACUM calycibus glabris, ſquamis imis reflexis. *Haller hiſt. v.* 1. *p.* 56.

HEDYPNOIS *Taraxacum Scopoli Flor. Carn. n.* 957.

HEDYPNOIS major *Fuſchii.*

DENS LEONIS latiore folio *Bauhin. Pin. p.* 126. *Gerard. emac.* 290, *Parkinſon* 780. *Raii Syn. ed.* 3. *p.* 170. *Hudſon Fl. Angl. p.* 297. *Oeder. Fl. Dan. Icon.* 574.

RADIX perennis, ſubfuſiformis, lactescens, externe pallide fuſca.

FOLIA laciniato-pinnatifida, plus aut minus profunde inciſa, laciniis acutis et acute dentatis, plerumque lævia, nonnunquam vero ſubaſpera.

SCAPI nudi, fiſtuloſi, lacteſcentes, verſus apicem ſubtomentoſi, uniflori.

CALYX *communis* lævis, glaucus, *ſquamis inferioribus reflexis, fig.* 1.

COROLLA *compoſita*, flava, corollulis hermaphroditis, numeroſis, æqualibus. *Propria* monopetala, ligulata, truncata quinquedentata, *fig.* 2.

STAMINA: FILAMENTA quinque capillaria, breviſſima, *fig.* 3. ANTHERÆ flavæ, in tubum cylindraceum coalitæ, *fig.* 4.

PISTILLUM: GERMEN oblongum, *fig.* 5, STYLUS longitudine corollæ, *fig.* 6. STIGMATA duo revoluta, *fig.* 7.

SEMEN ſubincurvatum, ſubcompreſſum, ſubtetragonum, ſtriatum, *apice echinatum*, pallide olivaceum, *fig.* 8, 9. PAPPUS ſtipitatus, ſimplex, ſtipite brevior, *fig.* 10

RECEPTACULUM nudum, alveolatum. *fig.* 11.

ROOT perennial, tapering, milky, externally of a pale brown colour.

LEAVES more or leſs deeply jagged, each jag or lacinia pointed, and ſharply indented, generally ſmooth, but ſometimes a little rough.

STALKS naked, hollow, milky, towards the top covered with a kind of down, ſupporting one flower on each.

CALYX: the *common* or general Calyx ſmooth, glaucous, *the lowermoſt leaves or ſquamæ turning back, fig.* 1.

COROLLA: the flower compounded of a great number of COROLLULÆ or leſſer flowers, which are yellow, hermaphrodite and equal; each *Corollula* monopetalous, tubular at bottom, and flat towards the extremity, the apex truncated and quinquedentate. *fig.* 2.

STAMINA: five FILAMENTS ſmall and very ſhort, *fig.* 3. the ANTHERÆ yellow, uniting and forming a cylindrical tube. *fig.* 4.

PISTILLUM: GERMEN oblong, *fig.* 5. STYLE the length of the COROLLA, *fig.* 6. STIGMATA two, rolling back, *fig.* 7.

SEED a little crooked, flattiſh, and ſomewhat four ſquare, ſtriated or grooved, *at top prickly*, of a pale olive colour, *fig.* 8, 9. the *Down* or pappus ſtanding on a footſtalk, ſimple, not feathery, ſhorter than the footſtalk, *fig.* 10.

RECEPTACLE naked, and full of little holes, *fig.* 11.

As a medicinal plant the Dandelion is thought to poſſeſs conſiderable virtues, and has been frequently made uſe of in obſtructions of the Viſcera, particularly the Jaundice. Some recommend the juice, others a decoction of the whole plant. It appears to operate chiefly by urine, and from poſſeſſing this property in a conſiderable degree it has acquired its vulgar name of *Piſs-a-bed.* Its other, and more common name, ſeems to be a corruption of the French term *Dent de Lion.*

As a kind of ſallad, this plant is by many prefered to any other, particularly by the inhabitants of Spitalfields, many of whom being deſcended from French families, that forſook their native country for one more favourable to religious liberty, ſtill retain the peculiar cuſtoms of that people in their diet, &c. They blanch, or whiten it as the gardeners do endive, and the inferior claſs generally uſe the ſimple proceſs of laying a tile on it, for whatever excludes the light from this or any other plant will make it become white, all plants deriving their colours from the fountain of light, the ſun. And it is remarkable, that many plants containing bitter and acrid juices are rendered by this proceſs mild, ſweet, and agreeable: who, for inſtance, could eat endive, celery, or even lettuce, in their wild uncultivated ſtates?

The Dandelion grows in the greateſt plenty in rich meadows, although it is very common on walls, and in courts and areas; when growing in a barren ſoil or dry ſituation the leaves become more narrow and jagged.

It flowers in May, and is the firſt plant which covers our meadows with a beautiful yellow coat, a few weeks afterwards, when it produceth its ſeed, it changes this for a white one.

Children frequently amuſe themſelves with blowing off the ſeeds, which ſtand naked on the receptacle or top of the ſtalk, and the round white heads, formed by the expanſion of their pappus or down, they call *clocks.*

The young botaniſt generally finds ſome difficulty in acquiring a clear idea of the ſtructure of theſe compound flowers, occaſioned by the minuteneſs of the parts of fructification, which however are much larger and more conſpicuous in this than in many others of the claſs SYNGENESIA, and therefore a proper flower for him to begin with.

On examining the flower of the Dandelion he will find that it is not a double flower, properly ſo called, as he might be led to think from its fullneſs, but that it is compoſed of a great number of *Floſculi*, or leſſer flowers placed cloſe together on one common receptacle or bottom, and encloſed by one common or general calyx. On diſſecting each of theſe *Floſculi*, he will find them to conſiſt of a COROLLA, or PETAL *fig.* 2, which at bottom is tubular, but towards the extremity flat, that from the bottom or tubular part of the corolla, five FILAMENTS ſpring, which are ſmall and ſhort, yet looſe and unconnected *fig.* 3, that theſe filaments are furniſhed with ANTHERÆ, which unite together and form a long ſlender tube *fig.* 4, beneath the corolla is placed the GERMEN, or future ſeed *fig.* 5, from whence the STYLE, or middle part of the Piſtillum proceeds and paſſes up through the middle of the flower, betwixt the Filaments and through the tube formed by the union of the Antheræ, *fig.* 6, and is furniſhed at top with two STIGMATA which roll back, *fig.* 7, at a little diſtance from the Germen the lower part of the Stylus is ſurrounded by numerous upright hairs which are the future PAPPUS or Down, *fig.* 10.

This, then, he will find to be the appearance of the parts of fructification in a full blown flower.

Thoſe parts of the flower which were more immediately or more remotely neceſſary to the impregnation of the Seed having now performed their office decay, the Corolla with the Stamina and upper part of the Piſtillum drops off, the Seed becomes larger, the lower part of the Piſtillum remains, is elongated and becomes the footſtalk of the Pappus, and the Seed as yet immature with the Pappus as yet moiſt are all encloſed and preſſed by the Calyx into a conical form. This is its appearance in its ſecond ſtate.

The fructification ſtill going forward the ſeed becomes ripe and brown, the PAPPUS now deprived of its moiſture expands itſelf every way, *fig.* 10, puſhes back the Calyx, and aſſumes a ſpherical form. The ſeeds fitted for vegetation and thus expoſed are carried away by the firſt ſtrong wind, and "a new race planted far from their native ſoil."

Such then is the curious proceſs which nature makes uſe of in the perfecting and diſſemination of this plant.

LAPSANA COMMUNIS. NIPPLEWORT.

LAPSANA *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Receptaculum nudum. *Cal.* calyculatus, ſquamis ſingulis interioribus canaliculatis.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LASTESCENTES.

LAPSANA *communis* calycibus fructus angulatis pedunculis tenuibus ramoſiſſimis. *Linnæi Syſt. Vegetab. p.* 602. *Sp. pl.* 1141. *Fl. Suecic. p.* 277.

LAMPSANA caule brachiato; foliis ovatis longe petiolatis; petiolis pinnatis. *Haller hiſt. n.* 6.

LAMPSANA *communis. Scopoli Fl. Carniol. n.* 988.

SONCHO affinis Lampſana domeſtica. *C. Bauhin pin. p.* 124.

LAMPSANA *Gerard. emac.* 255.

LAMPSANA vulgaris. *Parkinſon* 810. *Raii Syn.* 173. *Hudſon Fl. Angl. p.* 303.

RADIX annua, ſimplex, fibroſa.

CAULIS erectus, rigidus, bicubitalis, ſtriatus, ramoſus, hirſutus.

FOLIA oppoſita, hirſutula, ad radicem et in ima parte caulis uno vel altero pinnularum pari donata, ſegmento terminali magno, ovato, dentato, ſuperiora oblonga, dentata.

CALYX: communis calyculatus, angulatus, lævis, ſquamæ ad baſin minimæ erectæ, *fig.* 1.

COROLLA compoſita, imbricata, Corollulis hermaphroditis æqualibus; *propria* monopetala, ligulata, truncata quinque dentata, *fig.* 2.

STAMINA: FILAMENTA quinque capillaria, breviſſima; ANTHERÆ cylindracea tubuloſa, *fig.* 2.

PISTILLUM: GERMEN oblongiuſculum; STYLUS filiformis, longitudine Staminum; STIGMA bifidum, reflexum, *fig.* 2.

SEMINA circiter octodecem, oblonga paululum incurvata, pappo deſtituta, intra calycem, *fig.* 3, 4.

ROOT annual, ſimple, and fibrous

STALK upright, rigid, about two cubits high, ſtriated, branched, hairy.

LEAVES oppoſite, ſomewhat hairy, at the root, and on the lower part of the ſtalk furniſhed with one or two pair of pinnulæ; the ſegment which terminates the leaf large, oval, and indented; the upper leaves oblong and indented.

CALYX; the common Calyx ſmooth, and furniſhed at bottom with a few minute, upright ſquamulæ, *fig.* 1.

COROLLA compound, imbricated, the floſcules hermaphrodite and equal; each of them monopetalous, ligulate, truncated, and having five teeth, *fig.* 2.

STAMINA: five ſmall and very ſhort FILAMENTS; ANTHERÆ uniting into a tube, *fig.* 2.

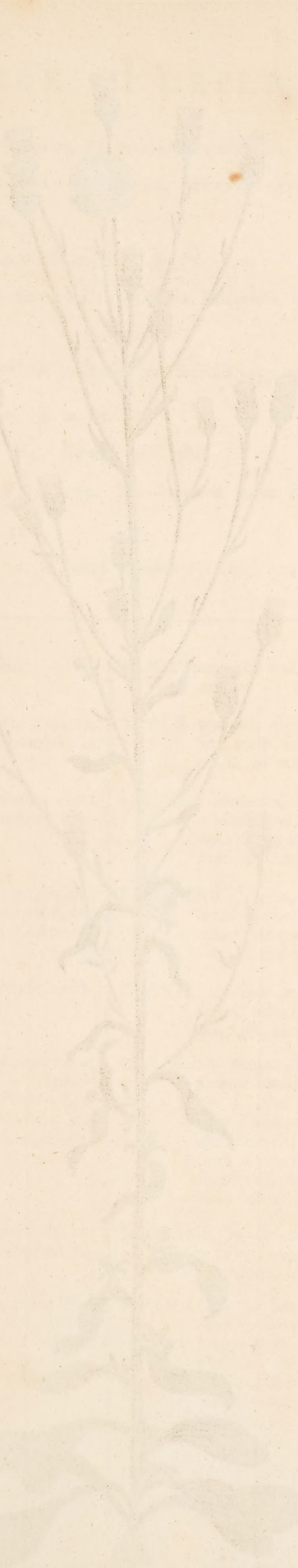
PISTILLUM: GERMEN oblong; STYLE filiform, the length of the Stamina: STIGMA bifid and turning back, *fig.* 2.

SEEDS about eighteen, oblong, a little bent in, without any down, contained within the Calyx, *fig.* 3, 4.

In gardens as a weed, this plant anſwers very well to the name of *communis*, being in general too common. Nature ſeems amply to have ſupplied the want of pappus or down in the ſeeds, by the great number of them produced in each plant. It alſo occurs on the ſides of banks, and in all cultivated ground; flowering during moſt of the Summer months.

According to RAY it receives its name of *Nipplewort* from its efficacy in curing ſore nipples: no other virtues or uſes ſeem attributed to it.

Lapsana communis.



5-6

Erigeron acre.

ERIGERON ACRE. PURPLE ERIGERON.

ERIGERON *Linnæi. Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Raii Synopſis. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

ERIGERON *Acre* pedunculis alternis unifloris. *Lin. Sp. Pl.* 1211.

ERIGERON *polymorphum Scopoli. Fl. Carniol.* DIAGN. folia lanceolata, baſi et apice attenuata. Germina villoſa. Pappus ruffus.

ERIGERON caule alterne ramoſo, petiolis unifloris, ſemifloſculis pappum æquantibus, et ſemifloſculis pappum ſuperantibus *Haller. hiſt. n.* 85. 86.

CONYZA cærulea acris *Bauhin Pin.* 265. *Gerard emac.* 484.

ASTER arvenſis cæruleus acris. *Raii Syn.* 175. Blue-flowered ſweet Fleabane.

CONYZA odorata cærulea *Parkinſon* 126.

SENECIO ſive Erigeron cœruleus *I. B.* II. 1043 *Hudſon Fl. Angl.* 314. *Oeder Fl. Dan. Tab.* 292.

RADIX perennis, fibroſa, fibris pallide fuſcis.

ROOT perennial and fibrous, the fibres of a pale brown colour.

CAULIS erectus, rigidus, pedalis, pupureus, ſtriatus, folioſus, hirſutus, in quibuſdam vix ramoſus in aliis ramoſiſſimus.

STALK upright, rigid, about a foot high, purple, ſtriated, leafy, and hirſute, in ſome ſcarce branched at all, in others very much ſo.

FOLIA alterna, ſeſſilia, hirſuta, inferiora obtuſe ovata baſi anguſtiora, ſuperiora anguſta, reflexa, tortuoſa, ramorum linearia, ſuberecta.

LEAVES alternate, ſeſſile, hirſute, the bottom ones of a blunt oval ſhape, and narrow at bottom, the upper ones narrow, turning back and twiſted, thoſe of the branches linear and nearly upright.

FLORES erecti, nunquam ſeſe explicantes ſicut plerique flores Claſſis Syngeneſiæ, externi purpurei, interni flaveſcentes, cum cavitate in medio.

FLOWERS upright, never expanding themſelves like moſt of the flowers of the Claſs Syngeneſia, externally purple, internally yellow, with a cavity in the middle.

CALYX *communis* imbricatus, ſquamis ſubulatis, erectis, purpureis, hirſutis, laxis, *fig.* 1.

CALYX: the *common* Calyx compoſed of a number of ſcales, which are narrow and pointed, upright, purpliſh, hirſute, and looſely connected *fig.* 1.

COROLLA *compoſita*, radiata; *Corollulæ hermaphroditæ* tubuloſæ, numeroſæ in diſco, *fig.* 2. *femineæ* ligulatæ, pauciores in radio, *fig.* 3. *Propria* hermaphroditi infundibuliformis, flava, limbo quinquefido, *fig.* 2: *Femineæ* ligulata, linearis, erecta, purpurea, hermaphroditâ longior, *fig.* 3.

COROLLA *compound* and radiated; the *hermaphrodite flowers* tubular and numerous in the middle, *fig.* 2. the *female flowers* ligulate, and fewer in the circumference, *fig.* 3: each *hermaphrodite* floſcule, funnel-ſhaped, yellow, with the limb divided into five ſegments, *fig.* 2: each *female* floſcule, linear, upright, purple, longer than the hermaphrodite flower, *fig.* 3.

STAMINA *hermaphroditis*: FILAMENTA quinque, capillaria, breviſſima: ANTHERÆ in tubum coalitæ.

STAMINA in the *hermaphrodite* flowers: five FILAMENTS, very ſmall and ſhort; the ANTHERÆ united into a tube.

PISTILLUM *Hermaphroditis*: GERMEN coronatum Pappo corolla paulo longior, *fig.* 4. STYLUS filiformis longitudine Pappi *fig.* 5; STIGMA bifidum *fig.* 6: *Femineis*: GERMEN tenue, Pappo longitudine fere Corollæ, *fig.* 7; STIGMATA duo, tenuiſſima, *fig.* 8.

PISTILLUM of the *hermaphrodite flowers*; the GERMEN crowned with a Pappus or Down a little longer than the Corolla, *fig.* 4; the STYLE filiform, the length of the Pappus, *fig.* 5; STIGMA bifid, *fig.* 6: of the *Female flowers*; the GERMEN ſlender, the Pappus nearly the length of the Corolla, *fig.* 7; two STIGMATA very ſlender, *fig.* 8.

SEMINA oblonga, pallide fuſca, *hirſuta, lente auct*: *fig.* 9: PAPPUS ſeſſilis, luteſcens, ſimplex, *fig.* 10.

SEEDS oblong, of a pale brown colour, *hirſute, magnified fig.* 9; PAPPUS ſeſſile, yellowiſh and ſimple *fig.* 10.

The Erigeron Acre is by no means a common plant in our neighbourhood, yet occurs very frequently on the hilly and chalky ground about *Charlton Wood*, particularly in the chalk pits on the left hand ſide of the lane behind the Church.

It flowers in the months of Auguſt and September, and is conſidered as a pretty ſure indication of a barren ſoil.

It has a taſte ſomewhat warm and biting, and hence has received its name of *Acris*.

We have rather choſen to retain LINNÆUS's name of *Erigeron* than adopt RAY's name of *Fleabane*, which tends to confound it with the Genus *Conyza*.

It frequently grows much taller, and is often found much ſmaller than the ſpecimen we have figured.

SENECIO VULGARIS. GROUNDSEL.

SENECIO *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA. *Receptaculum* nudum. *Pappus* ſimplex. *Calyx* cylindricus, calyculatus; *ſquamis apice ſphacelatis.*

Raii Syn. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

SENECIO *vulgaris* corollis nudis, foliis pinnato-ſinuatis amplexicaulibus, floribus ſparſis. *Linn. Syſt. Vegetab. p.* 630. *Sp. Pl.* 1216. *Fl. Suecic. p.* 290.

SENECIO corollis nudis, foliis pinnato-ſinuatis amplexicaulibus, floribus ſparſis. *Haller hiſt. n.* 58.

SENECIO *vulgaris. Scopoli Fl. Carniol. p.* 162. *n.* 1063. *Hudſon Fl. Angl. p.* 315.

SENECIO minor vulgaris. *Bauhin Pin.* 181.

SENECIO *vulgaris. Parkinſon* 671.

ERIGERON *Gerard. emac.* 278. *Raii Syn. p.* 178. Common Groundſel or Simſon.

RADIX annua, e plurimis fibrillis albidis conſtans.

CAULIS ſimplex, erectus, pedalis, ramoſus, ſæpe purpureus, ſubanguloſus, in junioribus plantis verſus apicem ſubtomentoſus.

FOLIA obſcure virentia, glabra, amplexicaulia, pinnato-ſinuata, pinnis acute dentatis.

PEDUNCULI ſtriati, uniflori, primum erecti, peracta floreſcentiâ penduli, demum erecti.

CALYX: *communis* primum cylindraceus, demum conicus; *Squamis* ſubulatis, plurimis, in cylindrum ſuperne contractis parallelis, contiguis, æqualibus, paucioribus baſin imbricatim tegentibus, apicibus omnium nigricantibus, *fig.* 1.

COROLLA *Compoſita*, longitudine calycis; *Corollulæ* hermaphroditæ, tubuloſæ, numeroſæ in diſco, infundibuliformes; *limbo* reflexo, quinquefido: Radio nullo, *fig.* 2, 3.

STAMINA: FILAMENTA quinque, capillaria, minima; ANTHERA cylindracea, tubuloſa.

PISTILLUM: GERMEN ovatum; STYLUS filiformis, longitudine ſtaminum; STIGMATA duo oblonga, revoluta.

SEMEN oblongum, ſtriatum, fuſcum; PAPPUS ſimplex, albus, ſemine triplo fere longior, *fig.* 4; RECEPTACULUM nudum, ſcabrum.

ROOT annual, conſiſting of numerous white fibres.

STALK ſingle, upright, about a foot high, branched, often purple, ſlightly angular, in the young plants, towards the top, thinly covered with down.

LEAVES of a deep and dull green colour, ſmooth, embracing the ſtalk, pinnato-ſinuated, the pinnæ ſharply indented.

PEDUNCLES ſtriated, ſupporting one flower on each, at firſt upright, when the flowering is over they become pendulous, and laſtly upright.

CALYX; the *common* Calyx firſt cylindrical and laſtly conical; the *Squamæ* ſubulate, numerous, contracted above into a Cylinder, parallel, contiguous and equal; thoſe at the baſe of the calyx fewer, lying one over another, the tips of all of them blackiſh, *fig.* 1.

COROLLA *Compound*, the length of the Calyx; the *Florets* hermaphrodite, tubular and numerous in the diſk or middle, funnel-ſhaped, the *limb* reflex and divided into five ſegments: the Radius wanting, *fig.* 2, 3.

STAMINA: FILAMENTS five, capillary, and very minute: ANTHERÆ united into a tube.

PISTILLUM: GERMEN oval; STYLE filiform the length of the Stamina; STIGMATA two, oblong, and bent back.

SEED oblong, ſtriated and brown; the PAPPUS ſimple, white, almoſt three times the length of the ſeed, *fig.* 4; RECEPTACLE naked, and rough.

The Groundſel is a Plant which is well known to grow exceedingly common in Gardens, cultivated Ground, and on Walls, flowering all the year if the weather be mild.

Although it is ſcarcely uſed at preſent as a medicine, yet according to ſome Authors it is not without conſiderable virtues: the juice, or decoction of it taken internally, operates gently by vomit; and the plant externally applied, is ſaid to be uſeful in inflamed Breaſts, the Scrophula, and other Inflamations.

Mr. RAY ſuſpects that it might be given with advantage in Worms, as Farriers and Horſe-dealers give the juice of it to Horſes that are troubled with thoſe kind of Worms called *Bottes*, and to which it is preſently fatal.

Birds of various kinds are fond of the ſeeds and tops of this plant; and a great variety of *Caterpillars* particularly thoſe of the *Phalæna Jacobeæ* eat it readily.

1 2 3 4

Senecio vulgaris.

Kilburn pinxit et Sculpsit

BELLIS PERENNIS. COMMON DAISY.

BELLIS. *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.
Raii Synopſis Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE, SEMINIBUS PAPPO DESTITUTIS, CORYMBIFERÆ DICTÆ.
BELLIS *perennis*, ſcapo nudo. *Linnæi Syſtem. Vegetab p.* 640. *Fl. Suecic. p.* 296. *Haller hiſt. p.* 39. *Scopoli. Fl. Carniol. v.* 2. 146.
BELLIS ſylveſtris minor *Bauhin pin.* 261. *Gerard emac.* 635. *Parkinſon* 530. *Raii Syn. p.* 184. *Hudſon Fl. Angl.* 320. *OEder. Fl. Dan. icon.* 503.

RADIX perennis, fibroſa.
FOLIA ovata, dentata, hirſutula, in petiolos longos decurrentia; diſrupta fila trahentia.

SCAPI teretes, hirſuti, triunciales, uniflori, ad apicem fiſtuloſi.
CALYX *communis* ſimplex, foliolis æqualibus *fig.* 1. apice membranaceis, hirſutis, obtuſis *fig.* 2. lente auct.
COROLLA *compoſita*, radiata: *Corollulæ* hermaphroditæ, tubuloſæ, numeroſæ in diſco. *Fœmininæ* ligulatæ, calycis foliis plures in radio. Floſculi *Hermaphroditi* infundibuliformes quinquefidi flavi, *fig.* 3, 4. lente auct: *Fœminæi* ligulati, lanceolati, albi, *fig.* 10.

STAMINA *Hermaphroditis*: FILAMENTA quinque breviſſima, *fig.* 5. ANTHERA cylindracea, tubuloſa, *fig.* 6.
PISTILLUM *Hermaphroditis*: GERMEN ovatum, *fig.* 9. STYLUS filiformis, *fig.* 8. STIGMA craſſiuſculum, bifidum, *fig.* 7. *Fœmineæ*: GERMEN ovatum, *fig.* 13. STYLUS filiformis. STIGMATA duo patula, linearia, *fig.* 11.

SEMINA ovata, compreſſa, marginata, pappo deſtituta, *fig.* 14.
RECEPTACULUM nudum, conicum, *fig.* 15.

ROOT perennial, and fibrous.
LEAVES oval, indented, ſlightly hirſute, running down the footſtalks, which are long and if broke acroſs appear ſtringy.
STALKS round, hirſute, about three inches high, ſupporting one flower, at top hollow.
CALYX the *common* calyx ſimple, the leaves equal, *fig.* 1. at the top membranous, hairy and obtuſe, *fig.* 2. one of the tips magnified.
COROLLA *Compound* and radiated: the *Corollulæ* or floſculi in the diſk or middle numerous, tubular, and *hermaphrodite*, thoſe in the radius or circumference flat, more numerous than the leaves of the calyx, and *female*. the *Hermaphrodite* Floſculi funnel ſhaped, divided into five ſegments and yellow, *fig.* 3, 4. magnified. The *Female* floſculi tubular at bottom, flat towards the extremity, lanceolate, and white, *fig.* 13.
STAMINA in the *Hermaphrodite* flower: five FILAMENTS very ſhort, *fig.* 5. ANTHERÆ united into a tube, *fig.* 6.
PISTILLUM of the *Hermaphrodite* flower: GERMEN oval, *fig.* 9. STYLE thread-ſhaped, *fig.* 8. STIGMA thickiſh and bifid, *fig.* 7. of the *Female* flower: GERMEN oval, *fig.* 9. STYLE thread-ſhaped, two STIGMATA narrow and ſpreading, *fig.* 11.
SEEDS oval, flat, margin'd without any pappus or down, *fig.* 14.
RECEPTACLE naked and of a conical figure, *fig.* 15.

The Daiſy has been recommended by ſome writers to be given in hectic fevers, cauſed by drinking cold water when the blood has been heated by exerciſe, either infuſed in water or milk.

In ſome parts of Germany, it is ſaid to be boiled and eaten with meat as a pot-herb; but it does not ſeem to promiſe much either as phyſic or food for man. Sheep and horſes refuſe it, and it is very probable that none of our cattle eat it willingly; if ſo the owners of lands pay dear for their enamelled meads, and daiſied carpets, but this part of huſbandry ſeems as yet little underſtood or attended to. As rural œconomiſts we have ventured to ſay thus much in diſpraiſe of this flower, notwithſtanding the laviſh encomiums the father of our Engliſh poets has beſtowed on it:

——— In ſpecial one called Se of the daie
The Däiſie, a floure white and rede,
And in french called *La bel Margarete*
O commendable floure, &c. ———
——— Above all flouris in the mede
Than love I moſt thoſe flouris white and rede
Such that men call in Daiſies in our Town.

Chaucer is perhaps the firſt that takes notice of the Horologium Floræ or opening and ſhutting of flowers at a particular time of the day.

——— She that is of all flouris the floure,
Fullfilled of all virtue and honoure;
And ever alike fair and freſh of hewe,
As well in winter as in ſummer newe,
As ſoon as ever the Sunne ginneth Weſt
To ſene this floure, how it will go to reſt,
For fear of night ſo hateth ſhe darkneſſe
Her chere is plainly ſpread in the brightneſſe
of the Sunne. ———
Well by reaſon men it calle maie
The Däiſie, or elſe the Eye of the Daie
And at the laſt there tho began anon
A Lady for to ſing right womanly
A Bargonet in praiſing the Daiſie
For as methought among her notis ſwete
She ſaid *Si douce eſt la Margarete*

Retuned by Dryden in his own numbers:

And then the Band of Flutes began to play,
To which a Lady ſung a Virelay;
And ſtill at every cloſe ſhe would repeat
The Burden of the Song the *Daiſy is ſo ſweet*
The Daiſy is ſo ſweet when ſhe begun
The troops of Knights and Dames continued on
The Conſort and the voice ſo charm'd my Ear
And ſooth'd my Soul that it was Heaven to hear.

Etymologiſts agree with the Old Bard in his derivation of the Daiſy, *viz.* Days Eye. Under the French name Margarette it is probable a compliment was intended to ſome lady, but Critics are not agreed who this lady was.

Like many other flowers the Daiſy becomes double by culture, and frequently *proliferous*, in this ſtate it is called the *Hen and Chicken* Daiſy.

Bellis perennis.

Viola odorata.

VIOLA ODORATA. SWEET VIOLET.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.

Calyx pentaphyllus. *Corolla* pentapetala, irregularis, poſtice cornuta. *Capſula* ſupera, trivalvis, unilocularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA *odorata* acaulis, foliis cordatis, ſtolonibus reptantibus, bractæis ſupra medium pedunculi.

VIOLA *odorata*, acaulis, foliis cordatis, ſtolonibus reptantibus. *Linn. Syſt. Vegetab.* p. 668.

VIOLA acaulis ſtolonifera, foliis cordatis, *Haller hiſt. helv. n.* 558

VIOLA *odorata, Scopoli Fl. Carniol. n.* 1097.

VIOLA martia purpurea flore ſimplici odoro. *Bauhin Pin. p.* 199. martia alba. *p.* 199.

VIOLA nigra ſive purpurea. *Ger. emac.* 550.

VIOLA ſimplex martia. *Parkinſon* 755. *Raii Syn. p.* 364. Purple Sweet Violet, and White Sweet-ſcented Violet. *Oeder Fl. Dan. icon.* 309.

RADIX perennis, fibroſa, albida, in ſeneſcente plantâ baſi petiolorum quotannis relictâ pars ſuperior radicis tuberculoſa evadit, et ſupra terram eminet; e ſinu horum nodorum naſcuntur ſtolones, qui humi repent, et foliis inſtruuntur ſtipulisque ejuſdem formæ ac illæ quæ ad baſin plantæ inveniuntur.

FOLIA ſubrotundo-cordata, crenata, ſuperne glabra, inferne hirſutula, junioribus involutis.

STIPULÆ radicales, ovato-lanceolatæ, membranaceæ, ſerratæ, dentibus glanduliferis.

PEDUNCULI radicales, infra Bractæas quadrangulares, ſupra Bractæas dorſo canaliculati, apice incurvati, uniflori.

BRACTEÆ duæ, lanceolatæ, plerumque oppoſitæ, appreſſæ, *ſupra medium pedunculi.*

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis oblongo-ovatis, obtuſis, e viridi purpuraſcentibus, *fig.* 1.

COROLLA pentapetala, irregularis, violacea, odorata, petalum infimum Nectario corniculato, obtuſiuſculo, apice compreſſo inſtructum, Petala lateralia prope baſin barbata, *fig.* 2.

STAMINA: FILAMENTA quinque breviſſima ægre diſtinguenda: ANTHERÆ flaveſcentes, biloculares, vix connexæ, membranâ ovato-acuta aurantiaca terminatæ; e parte poſteriori duarum Antherarum exit Nectariumque intrat appendicula viridis, linearis, compreſſa, *fig.* 5, 4. 3.

PISTILLUM: GERMEN ſubrotundum; STYLUS baſi tenuior et paululum tortuoſus; STIGMA uncinatum, Antheris paulo longius, *fig.* 6, 7.

PERICARPIUM priuſquam dehiſcit, ſubrotundo-triangulare, purpuraſcens, villoſum; trivalve valvulis ſubrotundis concavis, *fig.* 8.

SEMINA plurima, rotunda, nitida, ſtraminea, appendiculata, *fig.* 9.

ROOT perennial, fibrous and whitiſh; in old plants the upper part of the root becomes knobby, and appears above ground, the knots or knobs being formed from the bottoms of the foot-ſtalks of the leaves which are yearly left; from the boſoms of theſe knobs ſpring the ſtolones or ſhoots which creep on the ground, and are furniſhed with leaves and the ſame kind of Stipulæ which are obſervable at the bottom of the plant.

LEAVES heart-ſhaped and ſomewhat round at the tip, crenated, on the upper ſide ſmooth and ſhining, underneath ſlightly hairy, when young rolled in at the edges.

STIPULÆ ſpringing from the root, ovato-lanceolate, membranous, ſerrated at the edges, each ſerrature or tooth terminating in a minute gland.

PEDUNCLES ſpringing from the root, below the Bracteæ quadrangular, above the Bracteæ grooved on the upper ſide, at top incurvated, ſupporting one flower.

BRACTEÆ two, lanceolate, generally oppoſite to each other, preſſed to the ſtalk, and *placed above the middle of the Peduncle.*

CALYX: a PERIANTHIUM of five leaves, continuing, each leaf of an oblong oval ſhape, obtuſe at the tip, and of a greeniſh purple colour, *fig.* 1.

COROLLA: of five PETALS, irregular, of a bluiſh purple colour and ſweet ſmell, the lowermoſt terminating in a blunt horned NECTARIUM, a little flattened at the extremity, the two ſide Petals bearded near the baſe, *fig.* 2.

STAMINA: five FILAMENTS ſo ſhort as hardly to be diſtinguiſhed; ANTHERÆ yellowiſh, bilocular, ſcarcely connected together, terminated by an oval-pointed, orange-coloured membrane; from the back of two of the Antheræ, ſprings a ſlender, flat, greeniſh appendage, which enters the Nectarium, *fig.* 5, 4, 3.

PISTILLUM: GERMEN roundiſh; STYLE ſlendereſt at bottom and a little twiſted; STIGMA hooked, and a little longer than the Antheræ, *fig.* 6, 7.

SEED-VESSEL, before it burſts, roundiſh, rather approaching to triangular, of a purpliſh colour, and villous appearance, ſplitting into three roundiſh hollow valves, *fig.* 8.

SEEDS ſeveral, round, ſhining, of a ſtraw colour, terminated by a little appendage, *fig.* 9.

The *Viola odorata* delights to grow under warm hedges, particularly near Woods; if the Spring be favourable, is generally in full bloom in the month of March, and towards the latter end of Summer ripens its ſeeds. A variety of this plant frequently occurs with a white flower, not inferior in its agreeable ſcent to the blue one; nd ſometimes this plant is found double, in which ſtate it is often introduced into Gardens, and being furniſhed vith abundance of creeping ſhoots, it is by means of theſe propagated with the utmoſt facility.

This ſpecies of Violet bears a conſiderable reſemblance to the *Viola hirta*, the mode of diſtinguiſhing them ve ſhall point out when we deſcribe the latter.

A ſyrup made from the flowers is uſually kept in the ſhop, and frequently given to children where a gentle axative is required: it is likewiſe in uſe as a teſt to try acid and alcaline ſubſtances.

The

The ſeeds are ſaid by Authors to poſſeſs a diuretic quality, and hence the powder of them has been recommended in the ſtone and gravel.

The great BACON, who frequently deſcended from his ſublimer ſtudies, and amuſed himſelf with enquiries into the qualities and properties of plants, has left us a curious method of preſerving the ſcent of this flower.

" *Take Violets, and infuſe a good pugil in a quart of Vineger, let them ſtand three quarters of an hour, and take*
" *them forth, and refreſh the infuſion with like quantity of Violets ſeven times; and it will make a Vineger ſo freſh*
" *of the flower, as if a twelve moneth after it be brought you in a ſaucer, you ſhall ſmell it before it come at you.*
" Note. *It ſmelleth more perfectly of the flower a good while after than at the firſt.*"

The illuſtrious preſcriber has given no directions concerning the uſe of this preparation, but it appears to us to be one of the moſt grateful preſervatives againſt infection, eſpecially if the ſtrongeſt diſtilled vinegar which has been drawn over in glaſs, be made uſe of.

The Violet has been much complimented by the antient Poets; and our SHAKESPEARE gives it a conſpicuous place in his catalogue of flowers.

——————————" *Violets dim,*
" *But ſweeter than the lids of* JUNO'S *eyes,*
" *Or* CYTHEREA'S *breath.*"

The Commentators have not been ſucceſsful in informing us how the " *lids of* JUNO'S *eyes*" bear any reſemblance to " *Violets dim,*" not recollecting that *ιοβλεφαρος (having violet eyelids)* was a complimentary title with the Greek poets. This epithet alludes to a well known cuſtom which ſtill prevails in Greece, of colouring the eye lids blue. *" A " Grecian girl is painted blue round the eyes; and the inſides of the ſockets, with the edges on which the " laſhes grow, are tinged with black: For colouring the laſhes and ſocket of the eye, they throw incenſe or " Gum of Labdanum on ſome coals of fire, intercept the ſmoak which aſcends, with a plate, and collect the " ſoot: This I ſaw applied; a girl ſitting croſs-legged, as uſual, on a ſopha, and cloſing one of her eyes, took " the two laſhes between the fore finger and thumb of her left hand, pulling them forward, and then thruſting " in, at the external corner, a bodkin which has been immerſed in the ſoot, and extracting it again, the par- " ticles before adhering to it remained within, and were preſently ranged round the organ, ſerving as a foil to " its luſtre, beſides contributing, as they ſay, to its health, and increaſing its apparent magnitude." CHANDLER'S *Travels into Greece.*

Altho' the poet of nature has been rather obſcure on this ſubject, where he copies the ancients; he makes ample amends when he gives us the genuine effuſions of his own imagination. With what preciſion and delicacy does he deſcribe the ſoft enchantment of plaintive muſic, as reſembling the ſweetneſs of this flower; illuſtrating in a beautiful ſimile the object of one ſenſe by that of an other!

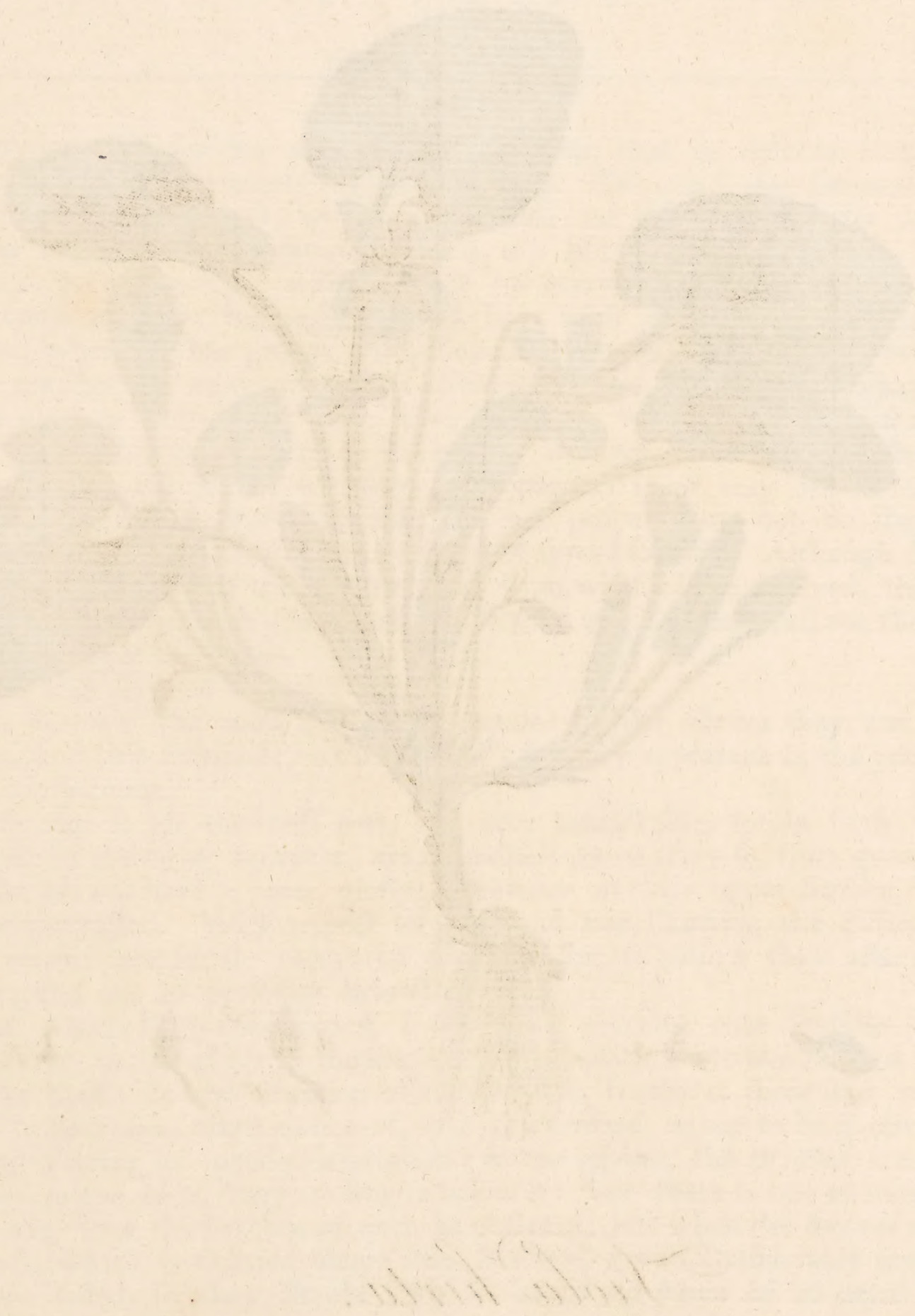
" *That ſtrain again;——it had a dying fall;*
" *Oh! it came o'er my ear, like the ſweet ſouth,*
" *That breathes upon* a bank of violets,
" *Stealing and giving odour!*"

*A Greek poet ſuppoſed to be a Chriſtian, from the ſeverity of his manners and purity of his inſtructions, forbids this cuſtom of painting the eyelids, in the rules of conduct which he addreſſes to young women,

" Μηδε μελαινε τεοισιν υπο βλεφαροισιν οπωπας."

NAUMACHIUS.

It is probable that the Greeks borrowed this faſhion from their Aſiatic neighbours; JEZEBEL, a native of Zidon, *put her eyes in painting*, as the tranſlators tell us in the margin of our bible; the Prophets alſo allude to and cenſure this cuſtom, ſee *Jeremiah* iv. 30. *Ezekiel* xxiii 40.



Viola hirta.

VIOLA HIRTA. HAIRY VIOLET.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.

Calyx pentaphyllus. *Corolla* pentapetala, irregularis, poſtice cornuta. *Capſula* ſupra, trivalvis, unilocularis.

Raii Synop. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA *hirta* acaulis, foliis petioliſque hirſutis, bractæis infra medium pedunculi.

VIOLA *hirta* acaulis, foliis cordatis piloſo hiſpidis. *Linn. Syſt. Vegetab. p.* 668.

VIOLA acaulis, foliis cordatis hiſpidis. *Haller hiſt. helv. n.* 559.

VIOLA *hirta Hudſon Fl. Angl. p.* 330.

VIOLA martia major hirſuta inodora. *Hiſt. ox. II.* 475.

VIOLA trachelii folio vulgo. *Raii hiſt.* 1051. *Syn. p.* 365. Violet with Throat-wort leaves.

So great is the ſimilarity betwixt this Species and the *Viola odorata*, that to deſcribe it in the ſame manner as I have that plant, would be to repeat nearly the ſame words. To avoid this ſameneſs of expreſſion, ſhall adopt a deſcription in the way of contraſt, which will enable me to point out the differences of each n a manner more ſtriking, and I hope equally ſatisfactory to my botanic readers.

I would firſt premiſe, that as it is my greateſt wiſh to clear up every difficulty reſpecting the ſpecies and arieties of thoſe plants which come properly before me, ſo I have with that view, not only examined this lant with the greateſt attention, where it has grown wild, but alſo cultivated it in my garden along with the *dorata*, and hence, ſeeing and noticing its mode of growth throughout the year, have perhaps been able to btain a clearer idea of its hiſtory, than thoſe who may have viewed it at one particular ſeaſon only.

The *Viola odorata* throws out from the upper part of its root a number of ſtolones or ſhoots, which trail n the ground, and quickly take root at the joints, whereby it propagates itſelf very faſt: the *hirta* likewiſe ncreaſes itſelf by throwing out young ſtalks; but then they are not procumbent, nor do they ever ſtrike root s thoſe of the *odorata* do; hence the *hirta* does not encreaſe ſo faſt, nor ſpread ſo wide. Although LINNÆUS makes conſiderable difference in the form of the roots of theſe plants, yet from what I have obſerved, this difference proceeds chiefly from the age of the roots; for in both ſpecies, the older they are, the more full are they of tubercles or icatrices, formed by the annual ſhedding of the leaves.

The radical *Stipulæ* are lanceolate and ſerrated in both ſpecies.

The *footſtalks* of the leaves form perhaps the moſt obvious difference; in the *odorata* they are nearly ſmooth; n the *hirta* they are very hirſute, and this hairineſs puts on a kind of ſilvery appearane in the young plants of this pecies, where it is remarkably conſpicuous.

In the leaves themſelves the difference is for the moſt part, not very remarkable, for in both ſpecies they are mewhat hirſute underneath; thoſe of the *hirta* however, are ſometimes remarkably ſo, from growing in particular ils or ſituations: the leaves of the *odorata* have a more gloſſy appearance on their upper ſurface, but this ſcarce iſcriminates them unleſs they are contraſted. With reſpect to ſhape and ſize likewiſe, the difference is not very bvious; both ſpecies when in bloom are ſmall, compared with the ſize to which they afterwards grow. In nake they are ſomewhat longer, and not ſo perfectly heart-ſhaped.

In the ſpecimens of this plant which I have examined, I could not perceive that ſenſible difference which INNÆUS notices *(vid. Mantiſſ. Plant. alt. p.* 483.) in the ſhape of the *Peduncle* above the Bracteæ; in both ſpecies hey certainly are channeled at the back: in the ſituation of the Bracteæ, however, there is a very conſiderable ifference, which does not appear to have been taken notice of, and this ſeemed to me to be ſo obvious a character, hat I truſt it will apologize for my altering its ſpecific deſcription: in the *odorata*, the *Bracteæ* are placed *above* the iddle of the Scapus, or Peduncle; in the *hirta*, they are ſituate below it: but there is one caution neceſſary to be bſerved reſpecting this character, viz. that the Bracteæ of each be obſerved, juſt when the flowers are fully expand-d, for as that part of the Scapus, which is ſituated above the Bracteæ, grows conſiderably longer by the time hat the flowers of the *odorata* are faded, ſo they ſhould both be examined when of an equal age, otherwiſe his diſtinction will not appear ſo remarkable.

The flowers of the *hirta*, in general, appear about a week later than thoſe of the *odorata*, are of a paler lue colour, and entirely want that ſweet fragrance which renders the *odorata* ſo grateful a harbinger of the pring. In the other parts of the fructification, theſe plants are very ſimilar to each other; but there is one rcumſtance reſpecting the manner in which they produce and diſperſe their ſeeds, which may not be generally known. LINNÆUS in his *Flora Suecica*, *n.* 789, obſerves that the flowers which the *Viola mirabilis* firſt produces from the oot, are furniſhed with Petals, yet that theſe for the moſt part are barren, while thoſe which blow later the ſame pring, and riſe from the ſtalk, although deſtitute of Petals, produce perfect ſeed: and JACQUIN, in his excellent ork the *Flora Auſtriaca*, where this plant is figured, *(Vol. I. pl.* 19.) confirms the truth of LINNÆUS's obſervations, nd ſays that the barreneſs of thoſe flowers appeared to ariſe from a deficiency of the Stylus. LINNÆUS in his valuable treatiſe above quoted, obſerves likewiſe, that the flowers of the *Viola montana*, which appear firſt, are furniſhed ith Petals, but that thoſe which are afterwards produced have no Petals, yet nevertheleſs are fertile; and this I nd, on repeated examination, to be the caſe with the *Viola odorata* and *hirta*, but more particularly the latter: they iffer from the *Viola mirabilis* in this reſpect, that all the flowers which are formed, both with and without Petals, roduce perfect ſeed. I was led to this diſcovery from obſerving a ſingle plant of the *Viola hirta*, to produce about the iddle of Summer, ten or twelve capſules of ripe ſeeds, on which I was certain in the Spring no more than two or hree bloſſoms had appeared: the next Spring I diſcovered, that beſides thoſe perfect bloſſoms which firſt ſpring up, his plant continues for a month or more to throw out new flowers, which are entirely deſtitute of Petals, or have nly the rudiments of them which never appear beyond the Calyx; but all the other parts of the fructification are erfect. The capſules in both theſe ſpecies, when they become nearly ripe, lay cloſe to the ground, ſo that when ney burſt, the ſeeds have an eaſy acceſs into the earth.

There is ſome difference with reſpect to the ſoil and ſituation in which theſe two plants delight; the *odorata* grows ery generally under warm hedges, and in woods; the other appears to be pretty much confined to a chalky ſoil, and ften occurs in more expoſed ſituations, in the fields and on the banks about *Charlton*, it may be found in tolerable bundance.

Viola tricolor.

VIOLA TRICOLOR. WILD PANSIE.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.
Raii Synop. Gen. 20. HERBÆ PENTAPETALÆ VASCULIFERÆ.
VIOLA tricolor, caule triquetro diffuſo, foliis oblongis inciſis, ſtipulis pinnatifidis. *Linn. Syſt. Vegetab. p.* 668. *Fl. Suecic.* 307.
VIOLA caule diffuſo, ramoſo, foliis ovatis dentatis, flore calyce paulo majori. *Haller. hiſt. tom.* 1. *n.* 569.
VIOLA bicolor arvenſis. *C. Bauhin. pin.* 200.
VIOLA tricolor ſylveſtris. *Parkinſon.* 755.
JACEA bicolor frugum et hortorum vitium. *I. Bauhin.* III. 548. *Raii Syn. p.* 336. 11. *Hudſon. Fl. Angl. p.* 331. *Scopoli. Fl. Carniol. p.* 183.

RADIX ſimplex, fibroſa.
CAULIS palmaris et ultra, plerumque diffuſus, ramoſus, anguloſus, ad baſin ſordide purpureus; rami alterni.
FOLIA longe petiolata, elliptica, crenata, inferioribus ſæpe minoribus, ſubrotundis, ſuperioribus anguſtis, ſubdentatis.
STIPULÆ ad baſin laciniato-pinnatifidæ, laciniis linearibus, extrema oblonga, dentata.

PEDUNCULI ſubquadrangulares, alterni, apice incurvati, dorſo canaliculati, ſtipulis duobus parvis, membranaceis, prope florem, inſtructi.

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis acutis, tria *ſuperiora* minora, ad baſin æqualia, ſuprema erecta, petalis ſupremis longiora, duo *inferiora* apice et baſi cæteris longiora, baſique latiora, petalis infimis breviora, *fig.* 2.

COROLLA pentapetala, irregularis, duo ſuperiora ſubrotunda, integerrima, albida, deorſum ſpectantia; lateralium *lamina* ovata, obtuſa, ad baſin barbata, lineaque brevi purpurea notata; infimum latum emarginatum, ad baſin flavum, lineis quinque purpureis pictum, CALCARE SEU NECTARIO
NECTARIUM. terminatum, longitudine calycis, apice violaceo, obtuſo, *fig.* 3, 4, 5, 6.

STAMINA: FILAMENTA quinque, breviſſima; ANTHERÆ albidæ, vix coadunatæ, biloculares, membranâ croceâ terminatæ, e dubous inferioribus exeunt, nectariumque intrant, appendiculæ duæ lineares, *fig.* 7, 8, 9, 10.
PISTILLUM: GERMEN ſubconicum, *fig.* 11; STYLUS ad baſin tortuoſus, ſtaminibus longior, *fig.* 12; STIGMA capitatum, oblique perforatum, perſiſtens, *fig.* 13.
PERICARPIUM: CAPSULA ovata, glabra, unilocularis, trivalvis, *fig.* 14, 15.
SEMINA plurima, ovata, fuſca, nitida, appendiculata, valvis ſeriatim affixa, *fig.* 15.

ROOT ſimple and fibrous.
STALK about four or ſix inches high, generally ſpreading, branched, angular, at bottom of a dull purple colour; the branches alternate.
LEAVES placed on long foot-ſtalks, elliptical, crenated, the lowermoſt often ſmaller and roundiſh, the uppermoſt narrow and ſlightly indented.
STIPULÆ at bottom jagged and pinnatifid, the laciniæ or jags linear, that which terminates the Stipula oblong and indented.
FOOT-STALKS of the flowers, nearly quadrangular, alternate, bent in at top, channeled on the back, and furniſhed with two ſmall membranous Stipulæ near the flower.
CALYX: a PERIANTHIUM of five leaves and continuing, the leaves ſharply pointed, the three *upper ones* ſmalleſt, and equal at bottom, the uppermoſt upright and longer than the uppermoſt petals, the two *under leaves* longer both at bottom and top than the reſt, and at bottom likewiſe broader, ſhorter than the lowermoſt petals, *fig.* 2.
COROLLA pentapetalous and irregular, the two uppermoſt petals roundiſh, entire, and reflected; the lamina or broad part of the ſide petals oval, obtuſe, bearded at bottom, and marked with a ſhort purple line; the lowermoſt petal broad, emarginate, yellow at bottom, and ſtreaked with five purple lines, and terminated by a
NECTARY. SPUR or NECTARY the length of the Calyx, with a blueiſh and blunt point, *fig.* 3, 4, 5, 6.
STAMINA: five FILAMENTS very ſhort; ANTHERÆ whitiſh, ſcarcely united, bilocular, terminated by a ſaffron coloured membrane; from the two lowermoſt two linear appendages go off and enter the Nectary, *fig.* 7, 8, 9, 10.
PISTILLUM: GERMEN ſomewhat conical, *fig.* 11; STYLE twiſted at bottom and longer than the Stamina, *fig.* 12; STIGMA forming a little head, obliquely perforated and continuing, *fig.* 13.
SEED-VESSEL: an oval ſmooth CAPSULE of one cavity and three valves, *fig.* 14, 15.
SEEDS numerous, oval, brown and ſhining, with a button to each, affixed in rows to the inſide of the valves, *fig.* 15.

FEW plants have acquired a greater variety of names than the *Viola Tricolor*; in different Authors and different counties we find the following, viz. *Wild Panſie*, *Herb Trinity*, *Hearts eaſe*, *Three faces under a hood*, *Cull me to you*, *Love in Idleneſs*, *&c.* what has occaſioned ſome of theſe is the different appearance it puts on from cultivation and change of ſoil; in a garden there are few flowers that can boaſt a greater variety or richneſs of colour, few that continue longer in bloſſom, or are cultivated with more eaſe; it is probable that the large yellow Violet, *Viola lutea*, is no more than a variety of this ſpecies.

The Panſie in its wild ſtate occurs very frequently in cultivated fields, and bloſſoms through moſt of the ſummer months. It is ſo hardy as to appear in Lapland amongſt the few other plants which ornament the waſtes of that Country during its ſhort ſummer. It is eaten by Kine and Goats.

The difference in the form of the Stigma ſeems to divide the plants of this Genus into two families, viz. *Panſies* and *Violets*, in the former the Stigma is round, with a remarkable hole on one ſide of it, in the latter it is hooked.

Linnæus remarks the black lines which ſometimes appear on the Petals, MILTON had obſerved the ſame, "*Panſies freakt with Jet*" In a poor ſoil the purple and yellow in the bloom of this flower frequently become very faint, and ſometimes fade into a perfect white, this variation in colour gives a propriety to the Metamorphoſis of this flower in which SHAKESPEAR pays an elegant compliment to his royal miſtreſs.

That very time I ſaw, (but thou could'ſt not)
Flying between the cold Moon and the Earth,
Cupid *all-arm'd: a certain aim he took,*
At a fair Veſtal, throned by the weſt,
And loos'd his love-ſhaft ſmartly from his bow,
As it ſhould pierce a hundred thouſand hearts:
But I might ſee young Cupid's *fiery ſhaft*
Quench'd in the chaſte beams of the watery moon,
And the imperial votreſs paſſed on,
In maiden meditation fancy-free.
Yet mark'd I where the bolt of Cupid *fell,*
It fell upon a little weſtern flower;
Before, milk-white; now purple with Love's wound,
And Maidens call it Love in Idleneſs.

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Ophrys Apifera.

Kilburn pinxt et Sculpt

OPHRYS APIFERA. BEE ORCHIS.

OPHRYS. *Lin. Gen. Plant. ed.* 3. GYNANDRIA DIANDRIA.
ORCHIS. *Raii Synopſis*, ed. 3. 379. HERBÆ BULBOSIS AFFINES.

OPHRYS. bulbis ſubrotundis, ſcapo folioſo, nectarii labio quinquelobo; lobis ſubtus inflexis. *Hudſon. Flor. Angl.* 340.

ORCHIS. radicibus ſubrotundis, labello holoſericeo, emarginato, appendiculato. *Haller. Hiſt. Vol.* 2. 1266. *tab.* 24. Duas ſpecies *apiferam* et *muſciferam* HUDSONIS et HALLERI ſub uno nomine *Inſectiferæ* conjungit CL. LINNÆUS.

Fuſchii icon 560. *Bauhin pin.* 83. *Gerard, emac.* 212.

RADIX. Bulbi duo, ſubrotundi, inæquales, radiculis longis vix fibroſis ſupra inſtructi.

CAULIS Semipedalis aut pedalis, teres, *fig.* 1. folioſus.

FOLIA Vaginantia, ovato lanceolata, ſubtus ſubargentea, fibris lineata, ſæpe mutilata et fuſca.

BRACTEÆ *magnæ*, *vaginantes*, virides, longitudine floris.

FLORES a tribus ad ſex, ſpicati.

COROLLA. PETALA quinque, tria exteriora reliquis majora, ovata, concava, reflexa, purpuraſcentia, ſerioribus pallidioribus, ſubcarinata, carina viridi, *fig.* 2; duo interiora exterioribus quadruplo minora, anguſta, *hirſuta*, *poſtice canaliculata*, *ad baſin latiora*, antrorſum extantia.

NECTARII Labellum amplum, leniter convexum, ſuborbiculatum, fuſco ſericeum, maculis flavis frequenter variegatum, quinquelobum, *lobis inflexis*, *fig.* 3. *lateralibus ſubtriangularibus*, *hirſutis*; *fig.* 4. medio anteriorum productiore, apice recurvato flavo, *fig.* 5.

Machina ſtaminum ſive Stylus longa, ſuberecta, *apice incurvata et ſurſum recurvata*, *fig.* 11. antice bilocularis, loculis apertis, *fig.* 12, anguſtis, marginibus albis, membranaceis. *fig.* 13.

STAMINA. FILAMENTA duo, *fig.* 6. e ſquamula nectarifera ad baſin Styli exeuntia, nutantia, Stigmati frequenter adhærentia, *fig.* 8. baſi glandula ſive globulo albo pellucido inſtructa, *fig*, 7. ANTHERÆ ſubrotundæ flavæ, *fig.* 9.

PISTILLUM. GERMEN oblongum, hexangulare, angulis obtuſis *rectis*, STIGMA, *fig.* 10. melleo liquore obductum, cui particulæ antherarum frequenter adhærent.

PERICARPIUM. CAPSULA oblonga, fuſca, uncialis, *fig.* 14, unilocularis, *fig.* 16, trivalvis, valvis carinatis. *fig.* 15.

SEMINA plurima, minuta, oblonga, utraque extremitate membranacea, pellucida, reticulata, *fig.* 18, lente aucta, interiori parti carinæ longitudinaliter affixa *fig.* 17.

ROOT. Two roundiſh, unequal bulbs, furniſhed at top with a few ſmall longiſh fibres, but little branched.

STALK from half a foot to a foot high, round, *fig.* 1, leafy.

LEAVES embracing the ſtalk, of an oval pointed ſhape, underneath ſilvery, with linear fibres, frequently imperfect, and of a brown colour.

FLORAL LEAVES *large*, *in the form of a ſheath*, green, and of equal length with the flowers.

FLOWERS from three to ſix growing in a ſpike.

COROLLA. five PETALS, the three exterior larger than the reſt, oval, concave, turning back, purpliſh, ſomewhat keel ſhaped, the keel green, *fig.* 2. the latter flowering paleſt; the two interior four times ſmaller than the others, narrow, *hairy*, *hollow behind*, *broadeſt at bottom*, and projecting forward.

NECTARY. The lip of the Nectary, large, ſomewhat convex, roundiſh, of a ſilky brown colour, frequently variegated with yellow ſpots; having five lobes, *the lobes bending underneath*, fig. 3. *The two ſide lobes*, *ſomewhat triangular and hairy*, fig. 4. the middle of the anterior running out to a point, which turns back, and is of a yellow colour, *fig.* 5. the Style which in this plant ſupports the Stamina, long, upright, *at the tip bending downwards and again upwards*, fig. 11. anteriorly having two cavities which are open and narrow, *fig.* 11. the edges white and membranous, *fig.* 13.

STAMINA. two FILAMENTS, *fig.* 6, ariſing from the bottom of the ſtyle out a nectariferous ſcale, hanging down, frequently adhering to the Stigma, *fig.* 8. furniſhed at bottom with a ſmall tranſparent gland or globule, *fig.* 7.—The ANTHERÆ roundiſh and yellow, *fig.* 6.

PISTILLUM. the GERMEN oblong, having ſix angles, the angles obtuſe, *not twiſted*, the STIGMA, *fig.* 10, covered with a viſcid ſubſtance like honey, to which ſmall particles of the Antheræ frequently adhere.

SEED VESSEL. a CAPSULE about an inch in length, oblong, brown, *fig.* 14. of one cavity, *fig.* 16, and three valves, the valves keel ſhaped. *fig.* 15.

SEEDS numerous, ſmall, oblong; at each end membranous, tranſparent, and reticulated, *fig.* 18. magnified, affixed lengthwiſe to the inſide of the keel of each valve, *fig.* 17.

Flowers in the Months of JUNE and JULY, the Seed is ripe the latter End of AUGUST.

Grows generally on chalky ground near woods, and ſometimes in meadows; is become ſo rare about *London*, as ſcarcely to be found with any certainty—Mr. *Alchorne* informs me he has frequently gathered it in the pits behind *Charlton* church, and in the woods near *Chiſſelhurſt* in *Kent*.—But it is often met with in plenty at a greater diſtance from town.

The root appears to poſſeſs the ſame virtues with thoſe of the Orchis from which Salop is made, but being much ſmaller, is not worth cultivating on that account. The great reſemblance which the flower bears to a Bee, makes it much ſought after by Floriſts, whoſe curioſity indeed, often prompts them to exceed the bounds of moderation, rooting up all they find, without leaving a ſingle ſpecimen to chear the heart of the Student in his botanic excurſions. The beſt time of tranſplanting them is when they are in flower. This, with moſt of the other Orchis's, was cultivated with the greateſt ſucceſs by the late PETER COLLINSON, Eſq; (whoſe memory will always be revered by every Botaniſt) in his garden at *Mill-hill*.—His method was to place them in a ſoil and ſituation as natural to them as poſſible, and to ſuffer the graſs and herbage to grow round them.

I have not yet heard of their being propagated by ſeed; it is to be wiſhed that ſome intelligent Gardiner would exert himſelf in making ſome experiments to raiſe them in this way.

Botaniſts have often been at a loſs in claſſing many plants, to find ſome reſemblance by which they might diſtinguiſh their particular ſpecies; but in this plant the caſe is otherwiſe, the flower is ſo like the inſect that gives it its name, that it ſtrikes every beholder with admiration; what uſeful purpoſe is intended by it, we do not at preſent know: Some future Obſerver may perhaps diſcover, for they who will examine Nature herſelf, "have much to ſee."

Asplenium Scolopendrium.

Hildebrandt Direx et sculpt.

ASPLENIUM *SCOLOPENDRIUM.* HARTSTONGUE.

ASPLENIUM *Lin. Gen.* CRYPTOGAMIA FILICES.

Raii Synopſis. HERBÆ CAPILLARES ET AFFINES.

ASPLENIUM frondibus ſimplicibus cordato-lingulatis integerrimis, ſtipitibus hirſutis. *Lin. Sp. Pl.* 1537.

ASPLENIUM Frondes lanceolatæ, acuminatæ, baſi cordatæ, integerrimæ, medio latiores. *Scopoli Fl. Carn.*

ASPLENIUM petiolis hirſutis, folio longe lineari-lanceolato, integerrimo, circa petiolum exſciſſo. *Haller, hiſt. n.* 1695.

HEMIONITIS Fuſchii Icon. 294

PHYLLITIS vulgaris Cluſ. hiſt.

SCOLOPENDRIA vulgaris Tragi.

LINGUA CERVINA officinarum *Bauhin. pin.* 350. *Gerard. emac.* 1138. *Parkinſon.* 1046. *Raii Synop.* 116. *Hudſon. Fl. Angl.* 384.

RADIX perennis, fibroſiſſima, fuſca, fibris fibrillis tenuiſſimis inſtructis.

ROOT perennial, exceedingly fibrous; the fibres brown, and furniſhed with other fibres, which are very minute.

STIPITES plures, piloſi.

STALKS numerous and moſſy, or hairy.

FRONDES cordato-lingulatæ, longitudine pedales, latitudine fere bipollicares, glaberrimæ, margine undulato, nervo medio inferne piloſo.

LEAVES tongue-ſhaped, at bottom cordate, about a foot in length, and one inch and a half in breadth, of a bright yellowiſh green colour and ſhining, the margin a little waved, and the mid-rib on the under ſide moſſy.

FRUCTIFICATIO. Glomera linearia, obliqua, in pagina inferiore frondis nervo medio utrinque ſeriatim diſpoſita, *fig.* 1. 2. 3.

FRUCTIFICATION placed in oblique lines on the under ſide of the leaf, on each ſide of the mid-rib, *fig.* 1. 2. 3.

INVOLUCRUM. Squama linearis, bivalvis, longitudinaliter dehiſcens, *fig.* 2.

INVOLUCRUM a linear membrane or caſe, of two valves, opening longitudinally, *fig.* 2.

CAPSULÆ numeroſæ, ſubgloboſæ, uniloculares, pedicellatæ, annulo elaſtico cinctæ, *fig.* 5. 7. lente auctæ.

CAPSULES numerous, ſtanding on foot-ſtalks, nearly globular, ſurrounded by an elaſtic ring, and having one cavity, as they appear magnified, *fig.* 5. 7.

SEMINA numeroſa, ſubrotunda, minutiſſima, *fig.* 7. lente valde auctæ, *fig.* 8.

SEEDS roundiſh, very numerous and minute, *fig.* 7. as they appear through a greater magnifier, *fig.* 8.

THIS is one of thoſe plants which ſome Botanic Writers have called *Epiphylloſpermæ* from producing their ſeeds on the back of the leaves; LINNÆUS, includes it in his claſs, *Cryptogamia*, as neither Stamina nor Piſtilla have yet been diſcovered on it. The firſt appearance of fructification that we obſerve are ſome little bags or caſes of a yellowiſh or whitiſh green colour placed in rows on the under ſide of the leaves; *fig.* 1. on opening of which almoſt as ſoon as they become viſible, we find the capſules or ſeed-veſſels, *fig.* 2, very numerous, ſtanding upright, and cloſe together; at this time they appear of a green colour, as they approach towards maturity they change this for a deep brown; the caſes then open lengthways in the middle, the two ſides, by the protruſion of the capſules are turned quite back, and wholly diſappear, *fig.* 3. This membranous ſubſtance or caſe, may be conſidered as ſimilar to the *Calyptra* in moſſes, or *Calyx* in other plants, and ſerves to ſecure and defend the tender ſeed and capſules, which being now become ripe, exhibit a moſt ſtriking proof of that wiſdom which the benevolent Author of Nature manifeſts in all the works of his creation.

Each capſule or ſeed-veſſel conſiſts of three parts, firſt the foot-ſtalk, *fig.* 4, which ſupports and connects them to the leaf; ſecondly, the jointed ſpring, *fig.* 5, which nearly ſurrounds the third part, or cavity containing the ſeeds, *fig.* 6. 7.

The ſeeds being ripe, the cavity containing them is forced open by the elaſticity of the jointed ſpring, and the ſeeds ſcattered and thrown to a conſiderable diſtance; one half of the cavity remains connected to one end of the ſpring, and the other half to the other end, *fig.* 7.

Some of the capſules being ſooner ripe than others, diſcharge their ſeed ſooner, ſo that it is a conſiderable time before they all become empty. On applying an entire row before the microſcope for the firſt time, I was immediately ſtruck with the motion that appeared in them, and afterwards found that the warmth of my breath occaſioned a great number of the capſules to keep continually diſcharging their ſeeds, ſo as almoſt to give them the appearance of ſomething alive. The cloſeneſs of the capſules to one another affording me but a confuſed idea of their ſtructure, I ſeperated them with the point of a penknife, from their connection to the leaf, and again placed them before the microſcope, which then gave me a very different, and after a little examination, a very clear idea of their ſtructure; many appeared with the ſeeds diſcharged, ſeveral in the act of diſcharging them, and ſome as yet entire; it frequently happened that while I was intently looking at one which I expected would open, at the inſtant of diſcharging it would be carried out of my ſight by the ſtrength and elaſticity of the ſpring, and it was not 'till after repeated trials that I was able clearly to obſerve the manner of their opening. The ſeeds are very numerous, and ſcarcely viſible to the naked eye; when magnified, they appear of a roundiſh figure, and full of little projecting points.

Both GREW and SWAMMERDAM have given figures on this ſubject, but thoſe of SWAMMERDAM are by much the moſt natural. As a great deal of the ſatisfaction in viewing objects of this kind, depends on the kind, as well as goodneſs of the microſcope, that none of my Readers may be diſappointed in the experiments they may make with this entertaining inſtrument, I may inform them, that the microſcope I make uſe of is that which is ſold in the ſhops, by the name of ELLIS's *Aquatic Microſcope*, and which is made for this purpoſe with particular care and accuracy by GEORGE ADAMS of Fleet-Street, Mathematical Inſtrument Maker to his MAJESTY.

This plant may be found in ſeed from *September* to *November* in ſhady lanes and on walls, and is frequently found growing within-ſide of old wells. It is met with but rarely about town, though cultivated in moſt of our botanic gardens. The leaves are ſubject from a richneſs of ſoil to be much divided at their extremities, and very much curled at the edges.

It is an officinal plant, and is recommended by RAY from his own experience, as a good medicine againſt convulſive diſorders.

66

Polypodium vulgare

POLYPODIUM VULGARE. COMMON POLYPODY.

POLYPODIUM *Linnæi Gen. Pl.* CRYPTOGAMIA FILICES.

Fructific. in punctis ſubrotundis ſparſis per diſcum frondis.

Raii Syn. HERBÆ CAPILLARES ET AFFINES.

POLYPODIUM *vulgare* frondibus pinnatifidis : pinnis oblongis ſubſerratis obtuſis. *Linn. Syſt. Vegetab.* *p.* 786. *Fl. Suecic. p.* 373.

POLYPODIUM foliis pinnatis, lanceolatis, radice ſquamata. *Haller hiſt. n.* 1696.

POLYPODIUM *vulgare. Scopoli Fl. Carniol. n.* 1266.

POLYPODIUM *vulgare. Bauhin. pin.* 359.

POLYPODIUM *vulgare. Parkinſon* 1039.

POLYPODIUM *Gerard emac.* 1138. *Raii Syn. p.* 117, Polypody. *Hudſon Fl. Angl. p.* 387.

RADIX oblique ſub terræ ſperficie reptat, fibras ſuas ex tuberculis quibus plurimis ſcatet demittens, ad craſſitudinem fere minimi digiti accedens, ſquamis fuſcis tecta, colore foris buxea, intus fere herbacea, ſapore dulci, tandem acerbo et adſtringente.

ROOT creeps obliquely under the ſurface of the earth, ſending forth a number of fibres from little tubercles, which are plentifully diſtributed over its ſurface, about the thickneſs of the little finger, ſometimes ſlenderer, covered with brown moſſy ſcales, externally of a pale yellow colour, internally greeniſh, of a taſte at firſt ſweet, but finally ſoweriſh and aſtringent.

STIPITES læves, interne ſulcati.

STALKS ſmooth, grooved on the inner ſide.

FRONDES ſemipedales aut pedales, pinnatifidæ, pinnæ oblongæ, ſubſerratæ, obtuſæ, inferne pallidiores.

LEAVES from half a foot to a foot in length, pinnatifid ; the pinnæ oblong, ſlightly ſerrated, obtuſe, paleiſh underneath.

CAPSULÆ in acervulis, magnis, flavis, rotundis, nervo utrinque ſeriatim locatæ, pedicellatæ, ſubrotundæ, ſuperficie granulata a ſeminibus protuberantibus, annulo elaſtico brevi inſtructæ, in valvulas duas dehiſcentes, *fig.* 2, 3, 3, 5, 6.

CAPSULES placed in a row on each ſide the midrib of the leaf, in large, yellow, round dots, ſtanding on foot ſtalks, of a roundiſh ſhape, with the ſurface granulated from the ſeeds protuberating, furniſhed with a ſhort elaſtic ſpring, and opening into two valves, *fig.* 2, 3, 4, 5, 6.

SEMINA plurima, ovata, aut ſubreniformia flava, *fig.* 7, 8.

SEEDS numerous, oval or ſomewhat kidney-ſhaped, of a yellow colour, *fig.* 7, 8.

IN all thoſe plants of the *Fern Tribe* which I have hitherto had an opportunity of examining, there appears to be much the ſame mechaniſm in their parts of fructification ; one of the moſt ſtriking and uſeful of which is the elaſtic ring which ſurrounds the Capſules, by means of which they are forced open and the ſeeds diſcharged. So neceſſary a part one ſhould not conceive would be wanting in any of theſe plants, nor will it, I believe, be found to be ſo : yet many Botaniſts, and thoſe too of eminence, not only deny its exiſtence, but make the want of it a character to diſtinguiſh this Genus. GLEDITCH gives us the following as part of the generic character of the *Polypodium* "*Capſulæ annulo deſtitutæ.*" ADANSON alſo gives it the ſame character, "*ſans anneau.*" It will perhaps not be difficult to account for this miſtake ; and at the ſame time it will ſhew us how injurious it is to ſcience for Authors to take things for granted without examining for themſelves. In TOURNEFORT'S elegant figures of the Genera, the Capſules of the *Polypodium* are repreſented without any ring : on the truth of theſe figures it is highly probable that thoſe Authors have relied ; for had they made uſe of their own eyes, aſſiſted by a ſmall magnifier, they could not have avoided ſeeing what MALPIGHI long before their time delineated, though rudely, and GLEICHEN ſince more elegantly figured.

There is one circumſtance attending this ſpecies of *Polypodium*, which however does not run through the whole of this Genus, *viz.* the want of an Involucrum or Membrane ; the little dots or aſſemblage of Capſules are not covered with any membrane ; or if there be a membrane, it is very early deciduous, and not viſible when the Capſules have arrived at a tolerable degree of maturity.

This ſpecies of *Polypody* grows very common in woods and ſhady lanes on the old ſtumps of various trees ; it differs much in ſize : ſometimes it occurs on the Oak, in which caſe its virtue as a medicine has been more celebrated.

Its effects when taken inwardly are ſlightly purgative : it has been recommended in various diſorders of the Viſcera, in the Cachexy, ſwelling of the Spleen, Jaundice, obſtructions of the Meſenteric Glands, Hypochondriac Diſeaſe, Cough, Aſthma, &c. but it has generally been given with ſome other medicines.

In the preſent practice it is but little regarded.

Bryum Scoparium.

BRYUM SCOPARIUM. BROOM BRYUM.

BRYUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3: MUSCI.

BRYUM *ſcoparium*, Antheris erectiuſculis, pedunculis aggregatis, foliis ſecundis recurvatis, caule declinato.

Linnæi Syſt. Vegetab. p 797.

HYPNUM foliis falcatis, heteromallis; vaginis multifloris. *Haller hiſt. n.* 1777.

HYPNUM *ſcoparium. Scopoli Fl. Carn. p.* 334. DIAGN. Floreſcentia Hyemalis. Folia arcuata, ſecunda, tenuia. Setæ ſæpe plures.

BRYUM *ſcoparium*: ſurculo declinato, ramoſo, foliis ſecundis, recurvatis, primordialibus plumuloſis. *Necker. method. muſc. p.* 224.

HYPNUM *ſcoparium. Weis. Cryptogam. p.* 213.

BRYUM reclinatum, foliis falcatis, ſcoparum effigie: *The ſickle-leaf'd bending Beaſom Bryum. Dillen. muſc. p.* 357. *tab.* 46. *fig.* 16

BRYUM erectis capitulis anguſtifolium, caule reclinato. *Cat. Giſs.* 222. *Raii Syn.* 95. *Hudſon Fl. Angl. p.* 406.

CAULES unciales aut biunciales et ultra, ſuberecti, ramoſi, in denſo cæſpite collecti, ſordide rufi, infra multo tomento fuſco obſiti.

FOLIA caulem inæqualiter circumſtant, hinc in quibuſdam locis nudiuſculus relinquitur, in aliis foliis crebrioribus veſtitur, præcipue ad apicem, longa, linearia, acuminata, canaliculata, *fig.* 1, recurvata, ſecunda.

PEDUNCULI unciales aut biunciales, ad baſin rubicundi, erecti, ex uno latere caulium plerumque oriuntur, aliquando vero ex apice, ut plurimum ſolitarii, ſubinde vero duo ex eodem perichætio proveniunt, baſi bulbillo cylindraceo terminati, *fig.* 7, qui foliis pluribus latiuſculis, pilo terminatis, acû facile ſeparabilibus includitur, *fig.* 8, 9.

CAPSULÆ oblongæ et fere cylindraceæ, nunc erectæ, nunc paululum incurvatæ, *fig.* 3; OPERCULUM roſtratum, tenue, longitudine capſulæ et concolor, *fig.* 4; ORA ciliata ſive denticulata, *fig.* 5; CALYPTRA ſtraminea, longitudine Capſulæ, poſtquam medio diſrumpitur, baſi ſuo capſulam arcte cingit, *fig.* 2; POLLEN viride, *fig.* 6.

STALKS from one to two inches high and more, nearly upright, branched, growiug thickly together, of a dirty red colour, and covered at bottom with a dark brown wooly ſubſtance.

LEAVES: the leaves cover the ſtalk unequally, hence in ſome places it is left rather naked, in others more thickly covered with leaves, particularly towards the top, are long, linear, pointed, grooved, *fig.* 1, bent back, and turning all one way.

FOOT-STALKS an inch or two inches high, towards the bottom reddiſh, upright, ariſing generally from the ſide of the ſtalks, but ſometimes from the top, moſt commonly ſingle, but now and then two proceed from the ſame perichætium, furniſhed at bottom with a cylindrical bulb, *fig.* 7, which is incloſed by many broadiſh leaves, terminating in a hair, and eaſily ſeparated by a needle, *fig.* 8, 9.

CAPSULES oblong and almoſt cylindrical, ſometimes upright, ſometimes a little incurvated, *fig.* 3; the OPERCULUM the length of the Capſule, and of the ſame colour, terminating in a long ſlender point, *fig.* 4; the MOUTH ciliated or furniſhed with little teeth, *fig.* 5; the CALYPTRA ſtraw-coloured, the length of the Capſule, after burſting in the middle cloſely embracing the Capſule by its baſe, *fig.* 2; the POLLEN green, *fig.* 6.

DILLENIUS very juſtly remarks, that this Moſs ſeems to partake of the nature of both *Bryum* and *Hypnum*, but in his opinion, it comes neareſt to the *Bryum*, and of the ſame ſentiment appear to be LINNÆUS and NECKER, while HALLER, SCOPOLI, and WEIS, rank it among the *Hypnums*, and this they are led to, chiefly from the Peduncles being furniſhed at bottom with a kind of *Perichætium*; but DILLENIUS very properly obſerves, that although the peduncle is ſurrounded at bottom by many *ſquamæ* or *folioli*, yet theſe are not ſimilar to what occur in the generality of *Hypnums*, as they may with the point of a pin be eaſily ſeparated from one another, and then the baſe of the peduncle appears to be furniſhed with a *bulbillus* as in moſt of the *Bryums*: this circumſtance added to its general habit, appears fully to juſtify this moſt excellent Botaniſt in placing it with the *Bryums*, from whence it ought not to have been ſeparated without more weighty reaſons than have been advanced.

This Moſs diſtinguiſhes itſelf from moſt others by its beautifull and lively verdure; when young it puts on a very different appearance from what it has when farther advanced, being much ſhorter and its leaves upright; and DILLENIUS has ſometimes remarked in this ſpecies *Stellulæ fæmineæ*.

It grows in very large Clumps or Patches forming a ſoft and delightfull Carpet, on the banks which ſurround woods, at the bottom of trees, and on heaths.

It is found on ſome parts of Hampſtead heath producing its fructifications in February and March.

Bryum Undulatum.

BRYUM UNDULATUM. CURLED BRYUM.

BRYUM *Linnæi. Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

BRYUM *(undulatum)* antheris erectiuſculis, pedunculis ſubſolitariis, foliis lanceolatis carinatis undulatis patentibus ſerratis. *Linn. Syſt. Vegetab. p.* 797.

BRYUM foliis lanceolatis ſerratis, capſulis cylindricis inclinatis ariſtatis. *Haller. hiſt. tom.* 2. 1823.

BRYUM *phyllitidifolium:* furculo ſimplici, foliis undato-ſerrulatis, primordialibus plumuloſis. *Necker. method. muſcor. p.* 203. cur nomen triviale a Cl. Neckero mutaretur non video, cum analogia unde nomen ejus ſumitur obſcura ſit, obſervante Cl. Scopoli.

BRYUM Phyllitidis folio rugoſo acuto, capſulis incurvis. *Dillen muſc.* 360. *tab.* 46. *fig.* 18.

BRYUM undulatum. *Scopoli. Fl. Carniol. n.* 1301. *Raii Syn. p.* 95. 16. *Hudſon Fl. Angl.* 406. *Weis Cryptogam.* 196. *Oeder Fl. Dan. tab.* 497. noſtris duplo ſaltem minor, cum operculo nimis recto et acuto.

SURCULI unciales, aut biunciales, plerumque ſimplices, erecti, folioſi.

FOLIA lanceolata, undulata, carinata, *ſerrato-aculeata*, patentia, arefactione involuta, *fig.* 1.

PEDUNCULI ſimplices, (duo ex eodem furculo nonnunquam proveniunt) furculis plerumque longiores, erecti, rubri, *fig.* 2.

CAPSULA ſive ANTHERA cylindracea, incurvata, lente viſa ſubſtriata, primum viridis, dein ex livido-fuſca, demum rufa, *fig.* 3. Baſis OPERCULI hemiſphærica, rubra, apex pallida, ſetacea, obtuſiuſcula, *fig.* 5, Capſulæ ORA ciliata CILIIS inflexis, *fig.* 7; ANNULUS ruber, *fig.* 6; POLLEN ſeu SEMEN viride, *fig.* 8.

CALYPTRA pallide fuſca, acuminata, primum erecta, flexurâ capſulæ diſrumpitur, et recta manet, baſique ſuâ a Capſula ſecedit, *fig.* 4.

STALKS from one to two inches high, generally ſimple, upright and leafy.

LEAVES lanceolate, waved, keel-ſhaped, *minutely and ſharply ſerrated at the edges*, ſpreading, when dry curling in, *fig.* 1.

FOOT-STALKS of the fructification ſimple, (ſometimes two proceed from the ſame ſtalk) generally longer than the ſtalks, upright, and of a reddiſh colour, *fig.* 2.

CAPSULE or ANTHERA cylindrical, incurvated, if magnified appearing ſomewhat ſtriated; firſt green, then livid-brown, aud laſtly of a reddiſh brown colour; *fig.* 3, the bottom of the OPERCULUM hemiſpherical and red, the top paler, very ſlender and rather blunt; *fig.* 5, the MOUTH of the Capſule furniſhed with CILIÆ which bend inward, *fig.* 7; the ANNULUS or RING red, *fig.* 6; the POLLEN or SEED green, *fig.* 8.

CALYPTRA of a pale brown colour, and terminating in a long point, firſt upright, afterwards by the bending of the Capſule it becomes burſt at bottom, and remains ſtrait, with its baſe at ſome little diſtance from the Capſule.

THIS ſpecies of BRYUM is one of the largeſt we have in this Country, it produces its fructification from *November* to *February* and may be found in moſt of the woods near Town, as well as on the heaths, but more particularly in *Charlton Wood*, where it abounds.

As all its parts of fructification are large and diſtinct, the botanic Student who would inveſtigate this difficult claſs of plants, cannot with this view, ſelect any moſs more proper for his purpoſe.

Bryum hornum.

BRYUM HORNUM. SWANS-NECK BRYUM.

MNIUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI. Maſculus flos pedunculatus. Femineus flos in diſtincto ſæpius individuo.

Raii Synopſis Gen. 3. MUSCI.

MNIUM *hornum* antheris pendulis, pedunculo curvato, ſurculo ſimplici, foliolis margine ſcabris. *Linnæi Syſt. Vegetab.* 796.

BRYUM *hornum* ſurculo capitulifero ramoſiuſculo: ſtellifero ſimplici, primordialibus plumuloſis. *Necker. Method. Muſc. p.* 215.

MNIUM foliis lanceolatis, imbricatis, capſulis pendulis cylindricis obtuſis. *Haller. hiſt. helv.* 3. *p.* 54.

MNIUM *hornum* ſerratifolium. *Weis Cryptogam.* 149.

BRYUM antheris oblongis nutantibus, pedunculo curvato, foliolis ovatis, margine ſcabris. *Hudſon. Fl. Angl. p.* 415.

BRYUM ſtellare hornum ſylvarum, Capſulis magnis nutantibus. *Dillen. muſc.* 402.

BRYUM nitidum capitulis majoribus reflexis, calyptra imum vergente, pediculis oblongis e cauliculis novis egredientibus. *Raii Syn. p.* 102. 51.

Ad majores accedit hæc ſpecies.

CAULES unciales aut biunciales, radiculis ferrugineis, valde tomentoſis inſtructi, erecti, plerumque ramoſi, pedunculiferi et ſtelliferi, ad baſin rubicundi, STELLULÆ et PEDUNCULI, nunc ſeorſim, nunc ex eadem radice proveniunt, unusque aut plures Surculi e baſi caulis ſemper fere naſcuntur.

FOLIA ſaturate viridia, ovato-lanceolata, ſuberecta, pellucida, ad lentem *minute ſerrata, fig.* 1; nervo medio diſtincto et in mucronem brevem educto, in ſurculis fœmineis dictis apice ſtellatim expanſa, et paulo latiora, in junioribus anguſtiora et cauli magis adpreſſa.

PEDUNCULI terminales, biunciales, rubræ, verſus apicem ut recte obſervavit DILLENIUS inſtar *colli olorini* incurvati.

CAPSULÆ *oblongæ*, tumidæ, virides, nutantes, lente aucta, *fig.* 7; per longitudinem ſecta ut RECEPTACULUM conſpiciatur, *fig.* 9; CALYPTRA longa, acuminata, caduca, *fig.* 6; OPERCULUM breve, flaveſcens, *fig.* 8; ORA ciliata.

This ſpecies comes near to the largeſt ſize.

STALKS from one to two inches in height, furniſhed with roots which are of a ferruginous colour, and covered with a kind of wooly ſubſtance, upright and generally branched, reddiſh at bottom, producing both PEDUNCULI and STELLULÆ, which proceed ſometimes from the ſame, ſometimes from different roots, and one or ſeveral Surculi uſually ſpring from the bottom of the ſtalk.

LEAVES of a deep green colour, of an oval pointed ſhape, nearly upright, pellucid, when viewed with a glaſs *finely ſerrated at the edges, fig.* 1; the midrib diſtinct, and terminating in a ſhort point, on the tops of thoſe ſtalk, which are conſidered as female, they are expanded like a little ſtar and ſomewhat broader, in the young ſhoots they are narrower and preſſed cloſer to the ſtalk.

PEDUNCLES ſpringing from the ſummit of the ſtalks, about two inches in height, bent near the top like a *Swans Neck* as DILLENIUS has properly obſerved.

CAPSULES *oblong*, tumid, of a green colour and drooping, magnified, *fig.* 7; cut longitudinally through the middle that the RECEPTACULUM may be ſeen, *fig.* 9; the CALYPTRA long, pointed, and ſoon falling off, *fig.* 6; the OPERCULUM ſhort, of a yellowiſh colour, *fig.* 8; the MOUTH of the Capſule ciliated.

On examining with a Microſcope the tops of thoſe Stalks which are called *Stellulæ fæmineæ, fig.* 2, and which are conſidered by many as the female parts of the fructification in this Moſs, there appeared in the center of the *Stellula*, a great number of ſmall upright bodies, or Corpuſcles, of two kinds, *fig.* 3, the one white, pellucid, and jointed; the other of a greener colour, ſhorter, and of an oblong oval ſhape, vid. *fig.* 4, 5. They do not appear to me to have any thing in their Structure, in the leaſt ſimilar to any of the parts of fructification in plants, what their real ſtructure and uſes are, may perhaps be diſcovered by future obſervations.

This ſpecies occurs not unfrequently on moiſt banks in Woods, as in *Charlton* Wood, and the Woods about *Hampſtead*, producing its Fructifications in February and March.

As the *Capitula pulverulenta* of DILLENIUS, or *Sphærophylli* as they are called by NECKER, are entirely wanting in this Moſs, and as the exiſtence of thoſe ſingular little heads ſeems very obviouſly to diſtinguiſh the Genus *Mnium*, I have choſen rather to arrange it with DILLENIUS and HUDSON among the *Bryums*, than with LINNÆUS among the *Mniums*; for if we make *Mniums* of all the Moſſes which have *Stellulæ*, we ſhall involve ourſelves in conſiderable difficulties: many of thoſe *Stellulæ* are indeed very obvious, as in the preſent one, but in others they are very obſcure, ſo that it is difficult to ſay whether they exiſt in them or not; but if they were obviouſly to be diſtinguiſhed, there is not the leaſt likeneſs between a *Stellula* and *Sphærophyllum*, why then unite in one Genus plants which have ſuch very different appearances? Would it not be better to conſider the Moſſes which produce *Sphærophylli* or *little balls* as *Mniums*, according to DILLENIUS, and divide the *Bryums*, if neceſſary, into two families, viz. ſuch as have obvious *Stellulæ*, and ſuch as have *none*?

The name of *rough Bryum*, which Mr. HUDSON ſeems to have given to this Moſs for brevity's ſake, conveys an idea with which this *Bryum* does not ſeem perfectly to correſpond, it having no *roughneſs* except at the edges of the leaves, which are minutely ſerrated: I have therefore adopted DILLENIUS's name of *Swans Neck Bryum*, as being juſtifiable from the ſingular ſhape of the Peduncles, and being more likely to be remembered from its ſtriking analogy.

BROWN HORNED SWANS-NECK BROWN

HYPNUM PROLIFERUM. PROLIFEROUS HYPNUM

HYPNUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

HYPNUM *proliferum* ſurculis proliferis, plano-pinnatis, pedunculis aggregatis. *Linnæi Syſt. Vegetab. p.* 8

HYPNUM ramis teretibus pinnatis, pinnulis pinnatis, foliis adpreſſis. *Haller. hiſt.* 3. *p.* 33.

HYPNUM filicinum, Tamariſci foliis minoribus, non ſplendentibus. *Dillen. p.* 276. *icon.* 35. *fig.*

HYPNUM repens filicinum minus, luteo virens. *Catal Giſs.* 217. *Raii Synop. p.* 86. *n.* 36. *Hudſon, Angl. p.* 422. *Weis Cryptogam. p.* 230.

CAULES palmares ad dodrantales, repentes, hinc inde radiculas fuſcas exſerentes, ſæpe vero adeo intricate connexi ut humi ſerpere nequeant, foliis ovato-acuminatis, carinatis, mucronatis, ſparſe tectis, *fig.* 1. horum foliolorum ſuperficies, microſcopio valde aucta granuloſa apparet, *fig.* 2.

RAMI pulchre pinnati, deflexi, vireſcentes, ad luteum colorem plus minuſve accedentes pro ratione ſitus aut anni temporis, *omni ſplendore deſtituti, rachis concolor*, ad extremitatem plerumque incraſſatus. RAMULI et PINNULÆ foliolis exiliſſimis, confertis, nudo oculo vix conſpicuis imbricatim tecti; e diſco rami, aut frondis, novus caulis aut ſurculus plerumque exſurgit, unde plantula mire extenditur ac propagatur, et hinc *Prolifer* vocatur.

PEDUNCULI ſeſquiunciales, rubri, plerumque quatuor aut quinque, aliquando plures e caule aggregatim aſſurgunt, et in quibuſdam caulibus, Perichætia plura aut potius eorum rudimenta occurrunt, e quibus Pedunculi ſequente anno probabiliter naſcuntur.

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STALKS from three to nine inches in length, creeping on the ground, and here and there ſending forth ſmall brown fibres, but very often ſo intricately connected together as to be hindered from creeping, thinly covered with leaves of an oval pointed ſhape, having a ſtrong midrib which runs out to a fine point *fig.* 1. when greatly magnified the ſurface of theſe leaves exhibits a granulated appearance *fig.* 2.

BRANCHES beautifully pinnated, and bending downward, of a green colour, more or leſs inclined to yellow, according to its place of growth, and the ſeaſon of the year, *without any gloſs*; the *midrib of the ſame colour with the leaves* and generally thicker at its extremity; the ſmall leaves, laying one over another, and ſcarce diſcernible to the naked eye. From the middle of the branch or Frons moſt commonly ariſes a new ſtalk, or ſurculus, by which means the plant is ſingularly extended and propagated, and from this circumſtance it acquires the name of *Proliferous*.

PEDUNCLES about an inch and a half in length, of a bright red colour, generally about four or five ſometimes more, ſpring from the ſtalk nearly together, in ſome of the ſtalks there is the appearance of ſeveral *Perichætia* without peduncles which probably ariſe from them the next year. The PERICHÆTIUM *fig.* 3. which is the baſe of the peduncle, is of an oval ſhape, and covered with ſmall leaves which terminate in a long flexible point. The CAPSULES or ANTHERÆ containing the pollen or ſeed *fig.* 4, are incurvated, and of a brown orange colour. The OPERCULUM *fig.* 6, (which ſits on to the top of the Capſule, and when the ſeed contained within it, is ripe, falls off) is ſhort, and pointed; the mouth of the Capſule has two rows of CILIÆ *fig.* 8. 9; the exterior row *fig.* 8, orange coloured, and diverging, the tops of them ſometimes bending a little inward, and brittle when dry, the interior row *fig.* 9, converging, of a membranous texture, and when very much magnified, appearing reticulated. The POLLEN or SEED contained within the Capſules is green. The CALYPTRA *fig.* 5. which partly covers the anthera and operculum, and firſts drops off is of a white colour.

There is ſcarce a Wood in the environs of this City, on the borders of which this elegant ſpecies of Moſs doth not occur.

It produceth its fructifications from December to February; in this ſtate however it is but ſeldom met with, yet may be found by diligent ſearching. Linnæus in one of his journies through Sweden, obſerved this Moſs growing in the thickeſt Woods, obſcured with perpetual ſhade, and where all other plants periſhed.

Moſt of the writers who have made this claſs of plants more particularly the object of their enquiries, have generally made two diſtinct Genera of the Hypnum and Bryum, yet ſo great is the affinity betwixt them, and ſo much do they run into one another, that what ſome of theſe Authors call a Bryum, others denominate a Hypnum; indeed this diviſion ſeems adopted more to facilitate the inveſtigation of the plants of this numerous family, than from any real natural diviſion which takes place between them. The difference between ſome of the Hypnums and ſome of the Bryums is obvious to almoſt every one, but to aſcertain the limits where the one begins and the other terminates, ſeems a taſk too difficult for the moſt accurate Botaniſt.

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HYPNUM PROLIFERUM. PROLIFEROUS HYPNUM

HYPNUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

HYPNUM *proliferum* ſurculis proliferis, plano-pinnatis, pedunculis aggregatis. *Linnæi Syſt. Vegetab. p.*

HYPNUM ramis teretibus pinnatis, pinnulis pinnatis, foliis adpreſſis. *Haller. hiſt.* 3. *p.* 33.

HYPNUM filicinum, Tamariſci foliis minoribus, non ſplendentibus. *Dillen. p.* 276. *icon.* 35. *fig.*

HYPNUM repens filicinum minus, luteo virens. *Catal Giſs.* 217. *Raii Synop. p.* 86. *n.* 36. *Hudſon, Angl. p.* 422. *Weis Cryptogam. p.* 230.

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Hypnum Proliferum.

End of Vol

Veronica hederifolia

Sansom Sculp

VERONICA HEDERÆFOLIA. IVY-LEAVED SPEEDWELL.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. Limbo 4-partito, laciniâ infimâ anguſtiore. *Capſula* bilocularis. *Raii Syn. Gen.* 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *hederæfolia*, floribus ſolitariis, foliis cordatis planis quinquelobis. *Lin. Syſt. Vegetab. p.* 58. *Spec. Plant. p.* 19. *Flor. Suecic. p.* 7.

VERONICA caule procumbente; foliis lobatis, petiolis paucifloris. *Haller. Hiſt. Helv. n.* 550.

VERONICA *hederæfolia. Scopoli Fl. Carniol. p.* 21.

ALSINE Hederulæ folio. *Bauhin. Pin.* 250.

ALSINE Hederulæ folio minor. *Parkinſon.* 760.

ALSINE hederacea. *Ger. emac.* 616..

VERONICA floſculis ſingularibus, Hederulæ folio, Morſus Gallinæ minor dicta. Ivy-leaved Speedwell, or ſmall Henbit, *Raii Syn. p.* 280.

Hudſon. Fl. Angl. p. 6.

Lightfoot. Fl. Scot. p. 76.

RADIX annua, parva, fibroſa.

CAULIS decumbens, ſubramoſus, teres, craſſiuſculus, tener, pilis mollibus veſtitus, viticulis alſines inſtar geniculatus.

FOLIA alterna, petiolata, ſubcordata, trilobata aut quinquelobata, ſubcarnoſa, utrinque hirſuta, quinquenervia.

PEDUNCULI uniflori, axillares, demum reflexi.

CALYX: PERIANTHIUM tetraphyllum, foliolis magnis, cordatis, acutis, ciliatis, *fig.* 1.

COROLLA monopetala, rotata, pallide cœrulea, laciniis ovatis, infimâ anguſtiore, *fig.* 2, calyce brevioribus; Faux intus villoſa, *fig.* 3.

STAMINA: FILAMENTA duo, alba: ANTHERÆ cœruleſcentes, *fig.* 4, 5, 6.

PISTILLUM: GERMEN ſubrotundum: STYLUS filiformis, albus: STIGMA craſſum, album, *fig.* 7.

PERICARPIUM: CAPSULA magna, obcordata, ſubrotunda, bilocularis, *fig.* 8

SEMINA duo in ſingulo loculamento, magna, nectario Cypripedii haud diſſimilia, pallide fuſca, intus concava, umbilicata, *fig.* 9, 10, 11.

ROOT annual, ſmall, and fibrous.

STALK decumbent, ſomewhat branched, round, thickiſh, tender, covered with ſoft hairs, and ſtringy withinſide like Chickweed.

LEAVES alternate, ſtanding on foot-ſtalks, ſomewhat heart-ſhaped, with three or five lobes, a little fleſhy, and hirſute on each ſide.

FLOWER-STALKS, each ſupporting one flower, proceeding from the boſoms of the leaves, finally bending downward.

CALYX: a PERIANTHIUM of four leaves, which are large, heart-ſhaped, pointed, and edged with hairs, *fig.* 1.

COROLLA, of one PETAL, wheel-ſhaped, pale blue, the ſegments oval, the lower one narroweſt, *fig.* 2, ſhorter than the calyx; the Mouth villous within, *fig.* 3.

STAMINA: two white FILAMENTS: ANTHERÆ blueiſh, *fig.* 4, 5, 6.

PISTILLUM: GERMEN roundiſh; STYLE thread-ſhaped and white: STIGMA thick and white, *fig.* 7.

SEED-VESSELL: a CAPSULE, large, ſomewhat inverſely heart-ſhaped, roundiſh, with two cavities, *fig.* 8.

SEEDS two in each cavity, large, in form not unlike the Nectary of the Ladies Slipper, of a pale brown, hollow within, with a navel-like appearance, externally convex, and grooved or notched, *fig.* 9, 10, 11.

THE *Veronica hederæfolia* appears to be a very general plant throughout Europe.

Of our Engliſh *Speedwells*, it has the greateſt affinity to the *Veronica agreſtis*, as well in its habit and place of growth, as in the peculiar formation of its ſeed-veſſels and ſeeds: but although its ſeed-veſſels are nearly of the ſame ſize, yet its ſeeds are conſiderably larger: in the one we ſcarce ever obſerve more than four, and often but two; in the other we generally find eight or more; hence we are able to account for the remarkable large ſeed-leaves which occur in this ſpecies. The *hederæfolia* differs alſo from the *agreſtis* in ſeveral other reſpects; the leaves are more thinly placed on the ſtalks, and have ſeldom more than two or four notches in them; and the flowers are of a very pale blue colour.

Like the *agreſtis* it grows in gardens and corn-fields, particularly in the latter, when the ſoil is light, in great abundance; and flowers in April. Its ſeeds are ripe the latter end of May.

The farmer may conſider it as an harmleſs annual. Its virtues, if any, remain as yet undiſcovered.

N°. 133

Veronica arvensis

VERONICA ARVENSIS. WALL SPEEDWELL.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. limbo 4-partito, laciniâ infimâ anguſtiore. *Capſula* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *arvenſis* floribus ſolitariis, foliis cordatis inciſis pedunculo longioribus. *Lin. Syſt. Vegetab. p.* 57. *Sp. Pl. p.* 18.

VERONICA caule erecto, foliis ovatis, ſubhirſutis, dentatis; petiolis breviſſimis. *Haller. hiſt. helv. n.* 548.

VERONICA *arvenſis. Scopoli. Flor. Carniol. p.* 18.

ALSINE veronicæ foliis, floſculis cauliculis adhærentibus. *Bauhin. Pin.* 250.

ALSINE foliis Veronicæ. *Gerard. emac.* 613.

ALSINE foliis ſubrotundis Veronicæ. *Parkinſon.* 762.

VERONICA floſculis ſingularibus cauliculis adhærentibus. *Raii Syn. p.* 279, Speedwell Chickweed.

Oeder Fl. Dan. t. 515.

Hudſon Fl. Angl. 6. *ed.* 2. 6.

Lightfoot. Fl. Scot. p. 75.

RADIX annua, fibroſa.

CAULIS palmaris, aut dodrantalis, erectus, plerumque ramoſus, ſubinde ſimplex, (rami alternatim oppoſiti, adſcendentes,) teres, purpuraſcens, undique hirſutus.

FOLIA inferiora petiolata, hirſuta, ſubcordata, inferne ſæpe purpurea, obtuſa, planiuſcula, inciſa, quinquenervia, ſuperiora ſeſſilia, ſubtortuoſa.

FLORES pedunculis breviſſimis inſidentes, ſpicati, bractæâ lanceolatâ ſuffulti.

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-lanceolatis, hirſutulis, hirſutie glanduloſâ, duobus inferioribus duplo fere majoribus et longioribus, *fig.* 1.

COROLLA monopetala, ſubrotata, cœrulea, leviſſimo tactu decidua, tubus breviſſimus, albus, limbus quadripartitus, laciniis ovatis, infimâ anguſtiore, *fig.* 2.

STAMINA: FILAMENTA duo, alba, medio craſſiora, corollâ dimidio breviora: ANTHERÆ ſubcordatæ, flaveſcentes, *fig.* 3.

PISTILLUM: GERMEN obcordatum, compreſſum, viſcoſum, baſi glandulâ cincto: STYLUS breviſſimus, albus, rectus: STIGMA craſſum ſubtruncatum, *fig.* 4.

PERICARPIUM: CAPSULA obcordata, compreſſa, pallide fuſca, *fig.* 5, continens.

SEMINA circiter 14 ovata, compreſſa, medio depreſſa, *fig.* 6, 7.

ROOT annual and fibrous.

STALK upright, from three to nine inches in height, generally branched, now and then ſimple, (the branches alternately oppoſite and aſcending,) round, purpliſh, and hirſute on every ſide.

LEAVES on the bottom of the ſtalk ſtanding on foot-ſtalks, hirſute, ſomewhat heart-ſhaped, often purple on the under ſide, obtuſe, flattiſh, notched on the edges, having five ribs, the upper ones ſeſſile, and ſomewhat twiſted.

FLOWERS ſitting on very ſhort foot-ſtalks, growing in a ſpike, ſupported by a lanceolate floral-leaf

CALYX: a PERIANTHIUM deeply divided into four ſegments, which are oval, lanceolate, and hairy; (the hairs terminated with glands;) the two lowermoſt almoſt twice as large and long as the others, *fig.* 1.

COROLLA monopetalous, and ſomewhat wheel-ſhaped, of a blue colour, falling off on the leaſt touch; the tube very ſhort and white; the limb deeply divided into four ſegments, which are oval, the lower one narroweſt, *fig.* 2.

STAMINA: two white FILAMENTS thickeſt in the middle, half the length of the corolla: ANTHERÆ ſomewhat heart-ſhaped, and yellowiſh, *fig.* 3.

PISTILLUM: GERMEN inverſely heart-ſhaped, flattened, and viſcous, ſurrounded at bottom by a gland: STYLE very ſhort, white, and ſtrait; STIGMA thick, with an appearance of being cut off, *fig.* 4.

SEED-VESSEL a heart-ſhaped flattened CAPSULE, of a pale brown colour, *fig.* 8, containing of

SEEDS about fourteen, which are oval and flat, with a depreſſion in the middle, *fig.* 6, 7.

AS the *Veronica agreſtis* grows chiefly in gardens and cultivated ground, ſo this ſpecies, which is nearly allied to it, is moſt commonly found on walls, alſo in fallow fields, and on the borders of dry paſtures.

It flowers in April, and the ſeeds ripen in May.

The old botaniſts, inattentive to the parts of fructification, diſtinguiſhed this and ſome other ſpecies of Veronica, by the general name of *Alſine.*

Students are apt, as we have before obſerved, to confound it with the *agreſtis*, from which it differs in many reſpects: the ſtalk in particular is upright; the flowers are nearly ſeſſile; the ſeed-veſſels are much ſmaller, and when ripe form a ſpike.

It varies in ſize from one to ſix or eight inches: and on walls, the bottom leaves are frequently obſerved to be purple.

Veronica Beccabunga

VERONICA *BECABUNGA.* BROOKLIME.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. limbo 5-partito, lacinia infima anguſtiore.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

VERONICA *Becabunga* racemis lateralibus, foliis ovatis planis, caule repente. *Linn. Syſt. Vegetab. p.* 57.

VERONICA foliis ovatis, ſerratis, glabris, ex alis racemoſa. *Haller hiſt. n.* 534.

VERONICA *Becabunga. Scopoli Fl. Carniol. n.* 11.

ANAGALLIS aquatica minor folio ſubrotundo. *Bauhin pin.* 252.

ANAGALLIS aquatica vulgaris, ſive Becabunga. *Parkinſon* 1236.

ANAGALLIS ſive Becabunga. *Gerard emac.* 620.

VERONICA aquatica rotundifolia, Becabunga dicta minor. *Raii Syn.* 280, Common Brooklime. *Hudſon Fl. Angl. p.* 4. *Oeder Fl. Dan. Icon.* 511.

RADIX perennis, fibroſa, fibris plurimis, capillaribus, albis.

ROOT perennial, fibrous, the fibres numerous, very ſmall and white.

CAULES numeroſi, repentes, teretes, læves, craſſi, ſucculenti, rubentes, ramoſi.

STALKS numerous, creeping, round, ſmooth, thick, ſucculent, of a reddiſh colour, and branched.

FOLIA ovato-obtuſa, utrinque glabra, ſubcarnoſa, oppoſita, dentata, denticulis glandulâ terminatis.

LEAVES oval and obtuſe, ſmooth on both ſides, ſomewhat fleſhy, oppoſite, indented at the edges, each little tooth terminated by a gland.

FLORES pulchre cœrulei, ocello albo, racematim diſpoſiti, racemis ex utraque alâ prodeuntibus.

FLOWERS of a beautiful blue colour, with a white eye, growing in racemi or branches which proceed from the boſoms of the leaves on each ſide of the ſtalk.

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-acutis, lævibus, corolla brevioribus, *fig.* 2.

CALYX: a PERIANTHIUM divided into four ſegments, which are of an oval pointed ſhape, ſmooth, and ſhorter than the corolla, *fig.* 2.

COROLLA monopetala, ſubrotata, cœrulea, venis ſaturatioribus ad baſin ſtriatis, laciniis ſubovatis, infima anguſtiore, *fig.* 3.

COROLLA monopetalous, ſomewhat weel-ſhaped, of a blue colour, ſtriped at bottom with deeper veins of the ſame colour; the ſegments nearly oval; the lowermoſt narrower than the others, *fig.* 3.

STAMINA: FILAMENTA duo, alba, medio craſſiora: ANTHERÆ cœruleſcentes: POLLEN album, *fig.* 4.

STAMINA: two white FILAMENTS, thickeſt in the middle: ANTHERÆ blueiſh: the POLLEN white, *fig.* 4.

PISTILLUM: GERMEN ſubrotundum, didymum: STYLUS apice incraſſatus, purpureus: STIGMA capitatum, *fig.* 5.

PISTILLUM: GERMEN roundiſh, double: STYLE thickeſt at top and purple: STIGMA forming a little head, *fig.* 5.

PERICARPIUM: CAPSULA ſubrotunda, compreſſa, bilocularis, quadrivalvis, *fig.* 6.

SEED-VESEL: a roundiſh, flattened CAPSULE of two cavities and four valves, *fig.* 6.

SEMINA plurima, ovata, fuſca, *fig.* 7, 8.

SEEDS ſeveral, oval and brown, *fig.* 7, 8.

BROOKLIME grows very commonly in brooks and muddy waters, whence its name, and flowers in June and July. It is an officinal plant, and made uſe of in the ſcorbutic juices of the London Diſpenſatory, which ſeems to be the only purpoſe to which it is applied.

Poa rigida
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Sansom Sculp

POA RIGIDA. HARD MEADOW-GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *rigida* panicula lanceolata ſubramoſa ſecunda: ramulis alternis ſecundis. *Linn. Syſt. Vegetab. p.* 98.

GRAMEN panicula multiplici. *Bauhin. Pin. p.* 3.

GRAMEN exile duriuſculum in muris et aridis proveniens. *Raii Syn.* 410, Small Hard Graſs.

GRAMEN loliaceum murorum duriuſculum ſpica erecta rigida. *Hiſt. Oxon. III.* 182. *t.* 2. *fig.* 9.

GRAMEN minus duriuſculum. *Gerard.*

GRAMEN arvenſe, filicinâ, duriore panicula, gracilius. *Barrel. Ic.* 49.

Scheuchz. Agroſt. ed Haller. p. 271. *t.* 6. *fig.* 2. 3. ſpiculæ tantum.

Hudſon Fl. Angl. p. 35. *ed.* 2. *p.* 42.

RADIX annua, paucis fibrillis inſtructa.

CULMI plures, palmares, erecti, ad baſin infracti, plerumque ſimplices, læves, binodes.

FOLIA lanceolata, lævia, longitudine vaginæ, ſuberecta; *Membrana* brevis, obtuſa, apice lacera; *Vagina* lævis, lineata.

PANICULA lanceolata, ſeſquiuncialis, paululum recurvata, rigida, ſubſecunda.

SPICULÆ lineari-lanceolatæ, ſuboctofloræ, acutæ, ſubcompreſſæ, *fig.* 1.

CALYX: GLUMA bivalvis, valvulæ longitudine et magnitudine inæquales, ad lentem ſcabriuſculæ, *fig.* 2.

COROLLA: GLUMA bivalvis, valvulæ ſubæquales, ovato-acutæ, marginibus membranaceis, *fig.* 3.

STAMINA: FILAMENTA tria, capillaria. longitudine Corollæ: ANTHERÆ flavæ, minimæ, breves, utrinque furcatæ, *fig.* 4, 5.

NECTARIA: GLUMULÆ duæ, ovato-acutæ, longitudine Germinis, ope microſcopii viſibiles, *fig.* 6.

PISTILLUM: GERMEN turbinatum: STYLI duo ad baſin uſque ramoſi, *fig.* 7, 8.

SEMINA ovato-acuta, hinc convexa, inde concava.

ROOT annual, and furniſhed with few fibres.

STALKS ſeveral, about four inches high, upright, crooked at bottom, generally ſimple, ſmooth, with two knots or joints.

LEAVES lanceolate, ſmooth, the length of the ſheath, and nearly upright; *Membrane* at the baſe of the leaf ſhort, obtuſe, and jagged at top; *Sheath* ſmooth, and very finely grooved.

PANICLE lanceolate, about an inch and a half long, bent a little back, rigid, the ſpiculæ in ſome degree growing one way.

SPICULÆ of a ſhape betwixt linear and lanceolate, containing for the moſt part eight flowers, pointed and flattiſh *fig.* 1.

CALYX: a GLUME of two valves, the valves unequal in length and ſize, appearing roughiſh when viewed with a magnifier, *fig.* 2.

COROLLA: a GLUME of two valves, the valves nearly equal, of an oval pointed ſhape, the edges membranous, *fig.* 3.

STAMINA: three FILAMENTS, fine, the length of the Corollæ; ANTHERÆ yellow, very minute, ſhort, and forked at each end, *fig.* 4, 5.

NECTARIES: two ſmall GLUMES of an oval pointed ſhape, the length of the Germen, viſible by the help of a microſcope, *fig.* 6.

PISTILLUM: GERMEN larger at top than at bottom: STYLES two, branched down to the bottom, *fig.* 7, 8.

SEEDS of an oval pointed ſhape, convex on one ſide, and hollow on the other.

Neither HALLER nor SCOPOLI make any mention of this graſs. According to SCHEUCHZER, it is common in *Italy* and *France*, in dry fields, and ſometimes on walls: with us it is found more frequently on the latter; and though not ſo common as ſome of the graſſes, yet it is to be found on moſt of the walls about London, in May and June.

In very dry and barren ſituations, the ſtalks ſometimes are found ſimple, the panicle alſo not branched, and the ſpiculæ, inſtead of containing about eight flowers, which is the uſual number, have no more than three or four: in this ſtate SCHEUCHZER makes another ſpecies of it: this alteration, from an exceſs or ſcantineſs of nouriſhment, is what all plants are ſubject to; and no circumſtance ſeems to have been leſs regarded by Botaniſts—To form ſpecies or varieties from ſuch a cauſe, is to multiply plants without end. A compleat knowledge of a plant, is only to be attained by obſerving it at the different periods of its growth, in all the various ſituations in which it occurs—Information obtained from any other ſource is not to be depended on.

Poa pratensis

POA PRATENSIS. SMOOTH STALK'D MEADOW GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, multiflorus. *Spiculæ* ovatæ; valvulis margine ſcarioſis, acutiuſculis.

Rai Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *pratenſis* panicula diffuſa, ſpiculis ſubquinqueflоris, culmo erecto lævi, membrana foliorum obtuſo.

POA *pratenſis* panicula diffuſa, ſpiculis quinqueflоris glabris, culmo erecto tereti. *Linnæi Syſt. Vegetab. p.* 97. *Fl. Suecic.* 82.

POA *pratenſis. Scopoli Fl. Carniol. p.* 70. *n.* 100. *Diagn.* Panicula diffuſa ſpiculæ 2-3 floræ. Glumis inæqualibus, lanugine nulla.

POA panicula diffuſa locuſtis trifloris glabris. *Haller hiſt. n.* 1465. ſecundum *Scopoli.*

GRAMEN pratenſe paniculatum medium. *Raii Syn.* 409, The greater or middle ſort of Meadow Graſs. *Bauhin Pin.* 2. pratenſe minus. *Gerard* 2. *Parkinſon* 1156.

RADIX perennis, *repens*, intra terram fiſſuraſque murorum facile penetrans.

ROOT perennial and *creeping*, eaſily penetrating into the earth and crevices of walls.

CULMI plerumque pedales, erecti, *læves*, vix manifeſte ſtriati.

STALKS generally about a foot high, upright, *ſmooth*, ſcarce perceptibly ſtriated.

FOLIA lævia, ſaturate viridia, ſubinde glauca, membranâ *brevi obtuſa* inſtructa, *fig.* 11.

LEAVES ſmooth, of a deep green colour, ſometimes blueiſh, furniſhed with a *ſhort blunt* membrane, *fig.* 11.

PANICULA erecta, diffuſa.

PANICLE upright and ſpreading.

SPICULÆ ovato-acutæ, plerumque quinqueflоræ, etiam biflоræ, utrinque compreſſæ, *fig.* 1, 2.

SPICULÆ oval-pointed, generally with five flowers, ſometimes only two, flattened on each ſide, *fig.* 2.

CALYX: GLUMA bivalvis, valvulis inæqualibus, acuminatis, concavis, *fig.* 3.

CALYX a GLUME of two valves, unequal, acuminated and hollow, *fig.* 3.

COROLLA: GLUMA bivalvis, valvulæ ſubæquales, altera concava, carinâ ad lentem viſa ſcabriuſcula, altera planiuſcula, *fig.* 4; in fundo calycis *lanugo* obſervanda, *evulſis floſculis, fig.* 3, 5.

COROLLA a GLUME of two valves, the valves nearly equal; the one concave, with the keel appearing ſomewhat rough if magnified; the other flattiſh, *fig.* 4: in the bottom of the calyx a filamentoſe or wooly ſubſtance is apparent when the flowers are drawn out of it, *fig.* 3, 5.

STAMINA: FILAMENTA tria, capillaria, glumis longiora: ANTHERÆ utrinque bifurcæ, *fig.* 6.

STAMINA: three FILAMENTS, thread-like, longer than the glumes: ANTHERÆ forked at each end, *fig.* 6.

PISTILLUM: GERMEN ovatum: STYLI duo, ad baſin uſque ramoſi, *fig.* 7.

PISTILLUM: GERMEN oval: STYLES two, branched down to the bottom, *fig.* 7.

NECTARIUM: GLUMULÆ duæ ad baſin germinis, *fig.* 8, auct.

NECTARY: two little GLUMES at the baſe of the germen, *fig.* 8, mgnified.

SEMEN anguloſum, acuminatum, baſi lanugine inſtructo, *fig.* 9. nat. mag. *fig.* 10, auct.

SEED angular and pointed, at bottom wooly, of its natural ſize, *fig.* 9; magnified, *fig.* 10.

THE *Poa pratenſis* and *Poa trivialis* approach very near each other in their general appearance, ſo much ſo, indeed, that the botaniſt who is intimately acquainted with them, cannot, if he ſees them grow together, diſcriminate them at a little diſtance; and the characters from which modern botaniſts have drawn their ſpecific differences, have been ſo vague and indeterminate, that the ſtudent is never able to ſatisfy himſelf whether he has found the one or the other; yet there are not two graſſes which afford more obvious or ſatisfactory marks of diſtinction. The difficulty which I have experienced myſelf in the inveſtigation of theſe two plants, has made me exceedingly attentive to them; and what I relate is the reſult of repeated obſervations, joined to a careful culture of them.

Theſe

Theſe graſſes differ chiefly in the following particulars: the *pratenſis* is in every part perfectly ſmooth; while in the *trivialis* the ſtalk, leaves, ſheaths of the leaves, and branches of the panicle, all feel rough if the plant be drawn downward betwixt the thumb and finger: excluſive of this difference, which is a very good one for a common obſerver, in the *trivialis* the ſheath of the leaf is flatter and more deeply fluted: nor do the roots of theſe two plants differ leſs; the *trivialis* being ſimply fibrous; the *pratenſis* creeping, and ſending out many white ſhoots: but what diſtinguiſhes them moſt fully and moſt infallibly, is the difference in the membrane at the bottom of the leaf, where the ſheath begins; this in the *pratenſis* is very ſhort and blunt; in the *trivialis* it is long and pointed: and the beauty of this diſtinction is, that it is obvious to the moſt common obſerver; nor did I ever know it fail me, let the graſs vary ever ſo much in ſize and other particulars. They differ alſo with reſpect to the ſize of the ſpiculæ and the number of flowers contained in each: in the *trivialis* they are either biflorous or triflorous; in the *pratenſis* they are moſt commonly *quinqueflorous*. Such are the moſt obvious diſtinctions in the graſſes themſelves: other circumſtances contribute to render them ſtill more ſo. The *pratenſis* grows generally on walls; indeed there is not a wall in any of the villages around town on which it may not be found in abundance: it very frequently occurs on dry banks, and oftentimes in meadows. The *trivialis* is ſcarce ever found on walls, ſeldom on dry banks; but moſt frequently in moiſt meadows, or the ſides of ditches; ſo that the one graſs ſeems to delight in a dry, the other in a moiſt ſituation. They differ ſomewhat alſo in the time of their flowering; the *pratenſis* flowering about the third week in May, the *trivialis* the firſt week in June: and there is this remarkable with reſpect to the flowering of the *pratenſis*, that after it has flowered in the Spring, it ſhews no diſpoſition to flower during the Summer; while the *trivialis* is found in bloom, though not generally, during the whole of the Summer. Added to this, there is a firmneſs in the ſtalk of the *pratenſis* not perceivable in the *trivialis*. By an attention to theſe remarks, I truſt the young botaniſt will acquire a clear idea of them, without having recourſe to the pubeſcence, &c. which, though laid ſo much ſtreſs on by LINNÆUS and SCOPOLI, is by no means adequate to the diſtinguiſhing of them. Indeed it is difficult to know rightly what they mean by *ſpiculis baſi pubeſcentibus*, as no pubeſcence is perceivable in them outwardly: but if one attempts to draw the floſcules out of the glumes of the calyx, we perceive a filamentoſe appearance, which ſeems to connect the florets and calyx together: but this appearance, which is indeed a very ſtriking and ſingular one, and which I have not yet obſerved in any other graſſes, takes place nearly in an equal degree in both: this ſubſtance adheres to the ſeed when ſeparated, and cauſes them to hang to one another as if there were cobwebs among them; ſo that a perſon ignorant of the cauſe, from an examination of ſuch ſeed, might conclude it old and good for nothing: this appearance is moſt ſtriking in the *trivialis*. RAY, whoſe deſcriptions always accord with nature, and are taken from the moſt obvious characters of the plant, mentions the roughneſs, *(Culmi nonnihil aſperi:)* but the particular ſhape of the membrane has not, that I know of, been noticed till now.

The *Poa pratenſis* may be conſidered as a valuable graſs, and one of thoſe which ought to enter into the compoſition of a good meadow or paſture: I ſay compoſition, becauſe I imagine every good meadow ſhould be compounded of a variety of graſſes, each having peculiar and valuable properties. We are not to expect all that can be wiſhed in a meadow in one graſs: ſome are calculated to produce food, and carry a beautiful verdure even in the depth of winter: ſome bring forth early ſhoots, and make choice food for cattle in the ſpring: ſome produce a large quantity of ſweet tender leaves at bottom; others by the weight and height of their ſtalks, and of their heads or panicles at top, encreaſe the weight of the hay: ſome ſhoot ſtrongly and produce a large aftermath: ſome give a more agreeable ſmell to the hay. So that to have a good meadow, we ſhould have a variety of graſſes; and if we may argue from analogy, a variety of food may alſo be more grateful to cattle.

The principal advantages of the *Poa pratenſis* are, that it is a ſweet graſs, and eaten readily by cattle in general: it carries its verdure in the winter better than moſt others, and throws out young and numerous ſhoots in the ſpring, ſo as to make good ſpring food. It produces a good crop of leaves at bottom, which make exceeding fine hay, and is fit for cutting early in the ſpring.

There is a glaucous or blueiſh variety of this graſs occurs frequently in meadows: it varies alſo in the number of its floſcules, from three to five, or ſometimes more: as likewiſe in its ſize: when growing on walls or dry banks, it does not reach half the height which it does in fertile meadows.

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Poa trivialis

POA TRIVIALIS. ROUGH-STALK'D MEADOW GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, multiflorus. *Spicula* ovata : valvulis margine ſcarioſis acutiuſculis. *Raii Syn. Gen.* 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *trivialis* panicula diffuſa, ſpiculis ſubtrifloris, culmo erecto ſcabro, membranâ foliorum acuminata.

POA *trivialis* panicula diffuſa, ſpiculis trifloris baſi pubeſcentibus, culmo erecto tereti. *Linnæi Syſt. Vegetab. p.* 97.

GRAMEN pratenſe paniculatum medium. *Bauhin pin.* 5. *Raii Syn. p.* 409. *n.* 2.

POA *trivialis*. *Scopoli Fl. Carniol. p.* 69. *n.* 39. *Diagn.* Lanugo ad baſin petali exterioris.

POA panicula diffuſa locuſtis trifloris villoſis. *Haller hiſt. n.* 1562. ſecundum Scopoli.

GRAMEN pratenſe minus. *Parkinſon* 1156. *Gerard emac.* 2. *Hudſon Fl. Angl. p.* 33.

RADIX fibroſa, capillacea.

CULMUS erectus, pedalis ad bipedalem, baſi repens, unde perenne evadit hoc gramen, ſtriatus, ſcabriuſculus, ſæpe purpureus.

FOLIA: VAGINA ſubcompreſſa, ſtriata, ſcabriuſcula: MEMBRANA ad baſin foliorum *longa*, *acuminata*, *fig.* 1; folia ipſa longa, ſcabriuſcula, ſubtus nitida, tenera.

PANICULA erecta, diffuſa.

SPICULÆ parvæ, biflorae, aut trifloræ, (*fig.* 2. 2. magn. nat. *fig.* 3. 3. lente auct,) nonnunquam etiam quadrifloræ, ovato-acuminatæ, ſubcompreſſæ.

GLUMÆ calycinæ bivalves, valvulis inæqualibus, acuminatis, carinatis, carinâ ſcabrâ, *fig.* 4. Si glumæ corollaceæ ex calycinis glumis extrahantur, lanugo (*fig.* 9,) conſpiciatur, huic et *Poæ pratenſi* quouſque obſervavi propria.

GLUMÆ corollaceæ bivalves, valvulis ſubæqualibus, acutis.

STAMINA: FILAMENTA tria capillaria, glumis paulo longiora, *fig.* 6: ANTHERÆ flavæ aut purpuraſcentes, demum utrinque furcatæ, *fig.* 6.

PISTILLUM: GERMEN minimum, ovatum: STYLI duo ad baſin fere plumoſi, *fig.* 7.

NECTARIUM: GLUMULÆ duæ teneræ ad baſin germinis, *fig.* 8.

SEMEN oblongo acuminatum, anguloſum, baſi lanugine inſtructum, *fig.* 10.

ROOT fibrous and capillary.

STALK upright, from one to two feet high, creeping at bottom, whence this graſs becomes perennial, ſtriated, rough, and often purple.

LEAVES: the SHEATH flattiſh, ſtriated, roughiſh; the MEMBRANE at the baſe of the leaf *long*, and *pointed*, *fig.* 1 : the leaves themſelves long, ſomewhat rough, ſhining underneath, and tender.

PANICLE upright and ſpreading.

SPICULÆ ſmall, containing two or three flowers, (*fig.* 2. 2. of their natural ſize, *fig.* 3. 3. magnified) and ſometimes even four flowers, of an oval pointed ſhape, and flattiſh.

GLUMES of the Calyx compoſed of two valves, which are unequal, pointed, and have the keel, or rib on the back, rough, *fig.* 4. If the glumes of the corolla are drawn out of the glumes of the calyx, a wooly ſubſtance (*fig.* 9,) is obſervable, and which, as far as I have hitherto noticed, is peculiar to this Graſs and the *Poa pratenſis*.

GLUMES of the corolla of two valves, the valves nearly equal and pointed, *fig.* 3.

STAMINA: three capillary FILAMENTS a little longer than the glumes, *fig.* 6: ANTHERÆ yellow or purpliſh, finally becoming forked at each end, *fig.* 6.

PISTILLUM: GERMEN very ſmall and oval: STYLES two, feathered almoſt to the bottom, *fig.* 7.

NECTARY: two little tender GLUMES at the bottom of the germen, *fig.* 8.

SEED oblong and pointed, angular, and furniſhed with a woolly ſubſtance at bottom, *fig.* 10.

THE means of diſtinguiſhing this Graſs from the *Poa pratenſis*, (for which it is the moſt liable to be miſtaken) with many other particulars relative to it, we have already given under the latter: conſidered in an agricultural light, it is certainly one of our beſt graſſes, both for hay and paſturage; indeed a good meadow can ſcarcely be formed without it. Its chief qualities are, that it produces a large quantity of ſweet tender leaves, which are preferred by cattle to moſt others, and which are convertible into exceeding fine hay. It is an early graſs, flowering about the beginning of June. It does not bear the froſts of the Winter ſo well, nor does it ſhoot ſo early in the Spring as the *Poa pratenſis*; but when the weather comes to be ſo warm as to make the graſſes in general ſhoot, this grows faſter, and produces a greater crop of bottom leaves, (the moſt deſirable parts of graſſes,) than moſt others.

It grows beſt in meadows that are tolerably moiſt: in dry paſtures it is often found, but much ſmaller

Hints relative to the Culture of the Graſſes.

When the advantages reſulting to the community from the introduction of *Wheat*, *Barley*, *Rye*, *Clover*, *Tares*, *St. Foin*, *Trefoil*, *&c.* many of which are natives of our own country, daily occur to us: when neither pains nor expence are ſpared to improve our arable lands, it ſeems ſtrange that ſo little care ſhould be taken of the improvement of our meadows and paſtures, which might doubtleſs be made to produce double or treble the crops they already do, by the judicious introduction of proper graſſes.

If

If we examine our meadows, paſtures, and downs, we ſhall find them pretty much in a ſtate of nature, excepting thoſe paſtures which of later years have been ſown with *Rye Graſs* and *Clover*, full of an indiſcriminate mixture of plants, ſome of which afford good, others bad food; ſome good crops, others ſcarce any crops at all. That I may not be thought to ſpeak at random on this matter, I ſhall here mention a few facts to corroborate what I have aſſerted.

My very worthy and much eſteemed friend THOMAS WHITE, Eſq; with a view to the aſcertaining the produce of ſeveral downs and hilly paſtures fed on by ſheep, procured from each of the undermentioned different downs and commons, in Hampſhire and Suſſex, a turf which, though not larger than about ſix inches in diameter, and choſen as pure as any part of the paſturage, produced, on being planted in a garden, the following plants.

Turf from *Selborn* Common.

1	*Plantago lanceolata.*	Narrow-leaved Plantain.
2	*Agroſtis capillaris.*	Fine panicled Agroſtis.
3	*Avena flaveſcens.*	Yellow Oat Graſs.
4	*Dactylis glomeratus.*	Rough Cocksfoot Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Poa annua.*	Common dwarf Poa.
7	*Cynoſurus criſtatus.*	Creſted Dogs-tail.
8	*Trifolium repens.*	Creeping or Dutch Clover.
9	*Crepis tectorum.*	Smooth Succory Hawkweed.
10	*Achillea Millefolium.*	Yarrow.
11	*Galium verum.*	Yellow Ladies Bedſtraw.
12	*Hypochæris radicata.*	Long-rooted Hawkweed.
13	*Hieracium Piloſella.*	Mouſe-ear Chickweed.
14	*Thymus Serpyllum.*	Wild Thyme.

Turf from *Oakhanger.*

1	*Trifolium repens.*	Creeping or Dutch Clover.
2	*Holcus lanatus.*	Meadow Soft Graſs.
3	*Poa annua.*	Common dwarf Poa.
4	*Agroſtis capillaris.*	Fine panicled Agroſtis.
5	——— *paluſtris.*	Marſh Agroſtis.

Turf from *Deortun.*

1	*Ranunculus repens.*	Creeping Crowfoot.
2	*Lolium perenne.*	Ray Graſs or perennial Darnel.
3	*Holcus lanatus.*	Meadow ſoft Graſs.
4	*Prunella vulgaris.*	Self-heal.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Agroſtis paluſtris.*	Marſh Agroſtis.
7	*Trifolium repens.*	Creeping or Dutch Clover.
8	*Crepis tectorum.*	Smooth Succory Hawkweed.
9	*Achillæa Millefolium.*	Yarrow.

Turf from *Glynd Hill.*

1	*Medicago lupulina.*	Black-ſeeded Medick, Trefoil or Nonſuch.
2	*Achillæa Millefolium.*	Yarrow.
3	*Poa pratenſis.*	Smooth-ſtalk'd Meadow Graſs.

Turf from *Glynd Hill.*

4	*Avena flaveſcens.*	Yellow Oat Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	——— *ovina.*	Sheeps Feſcue Graſs.
7	*Hieracium Piloſella.*	Mouſe-ear Hawkweed
8	*Agroſtis capillaris.*	Fine panicled Agroſtis.
9	*Trifolium repens.*	Creeping or Dutch Clover.
10	*Thymus Serpyllum.*	Wild Thyme.

Turf from *Short Heath.*

1	*Feſtuca bromoides.*	Barren Feſcue Graſs.
2	*Aira præcox.*	Early Aira.
3	*Juncus campeſtris.*	Hairy Ruſh.
4	*Poa annua.*	Common dwarf Poa.
5	*Agroſtis capillaris.*	Fine panicled Agroſtis.

Turf from *Mount Cabron.*

1	*Rumex acetoſa.*	Common Sorrel Dock.
2	*Daucus carota.*	Wild Carrot.
3	*Medicago lupulina.*	Black-ſeeded Medick, Trefoil or Nonſuch.
4	*Poterium ſanguiſorba.*	Burnet.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Avena flaveſcens.*	Yellow Oat Graſs.

Turf from *Ringmer Down.*

1	*Linum catharticum.*	Purging Flax.
2	*Scabioſa columbaria.*	Sheeps Scabious.
3	*Ornithopus perpuſillus.*	Bird's-foot.
4	*Avena flaveſcens.*	Yellow Oat Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Trifolium repens.*	Creeping or Dutch Clover.
7	*Hypochæris radicata.*	Long-rooted Hawkweed.
8	*Crepis tectorum.*	Smooth Succory Hawkweed.
9	*Lotus corniculata.*	Bird's-foot Trefoil.
10	*Juncus campeſtris.*	Hairy Ruſh.
11	*Hieracium piloſella.*	Mouſe-ear Hawkweed.
12	*Feſtuca ovina.*	Sheeps Feſcue Graſs.
13	*Thymus Serpyllum.*	Wild Thyme.
14	*Poa pratenſis.*	Smooth-ſtalk'd Meadow Graſs.

Theſe experiments prove that our downs and commons, which we in general conſider as more free from weeds than moſt of our paſtures, are altogether an aſſemblage of different plants; and our meadows are much the ſame. It muſt be allowed that there is a conſiderable difference in them; one meadow, or tract of land, ſhall naturally contain a greater number of good graſſes than another; another ſhall produce little more than a mixture of unprofitable weeds, ſuch as *Crowfoot*, particularly the creeping ſort, *Docks*, *Sorrel*, *Thiſtles*, *Mallows*, *Yarrow*, *Knapweed*, *Nettles*, *Ragwort*, *&c.* moſt of which having ſtrong perennial or creeping roots, continue in the ground, impoveriſh it, and overun the few good graſſes there are; ſo that the ground is very little worth. If the ground be manured, the unprofitable and noxious plants are thereby benefited as well as the graſs; for it is the extremity of folly to ſuppoſe that manure ſhall produce good plants if the roots or ſeeds of them were not in the ground before. It muſt be allowed, however, that if there be in the meadow any ſtrong growing graſſes, they may from manure overtop and deſtroy many annual plants, but not thoſe above-mentioned, which with many others, will grow with their growth and ſtrengthen with their ſtrength.

But it is not this kind of weed alone, which, perhaps, are the moſt miſchievous; theſe being viſible and known to the Farmer may be deſtroyed; but at the ſame time the ground may be overun with bad graſſes, which not being ſo eaſily diſtinguiſhed by the Farmer, cannot be ſo readily deſtroyed. Now graſſes may be conſidered as bad on ſeveral accounts: they may, though good in themſelves, produce ſo ſmall a crop as to be worth little or nothing, as the *early* and *ſilver Hair Graſs* and *Wall Poa*: they may, either from their rankneſs, roughneſs, or ſome other qualities not perceptible to us, be ſuch as cattle are not fond of, as *Cats-tail Graſs*, *Rough Cocks-foot* and ſome others: they may die on the ground, and give the meadows a dead and diſagreeable appearance in the winter, as ſome of the ſpecies of *Agroſtis*: or they may blow late in the ſummer, and be not fit for cutting 'till moſt of the good graſſes are decayed and gone off: and thus a meadow may be filled with noxious plants as effectually as if they were more evidently ſo.

Surely then it muſt be worth the perſons while, who would wiſh to lay down his land for meadow or paſture, or improve what is already bad, to be at ſome pains and expence about it, and ſow it with as much caution as he would to produce a crop of fine Wheat; the more ſo, indeed, as when his land is once filled with good graſſes, it remains a good meadow, or good paſture for ever, which will always look pleaſing, and if properly manured, and the ſeaſon prove not remarkably unfavourable, will each year produce a plentiful crop.

I have already obſerved, in ſpeaking of the *Poa pratenſis*, that a good meadow muſt conſiſt of a variety of graſſes, which ought all to come into bloom nearly at the ſame time; and if the graſſes be of the right kinds, they will begin to blow, and the whole meadow be fit for mowing the laſt week in May. The advantages of this early hay-making are very conſiderable: this part of the year is very often extremely favourable in point of weather to the making of hay: it is not poſtponed ſo as to interfere with the harveſt: cattle may be turned the ſooner into the fields to graze; or another crop of hay be produced in good time for the ſecond making.

Alopecurus myosuroides

ALOPECURUS MYOSUROIDES. FIELD FOXTAIL GRASS.

ALOPECURUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Cor.* 1-valvis.

Rai Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

ALOPECURUS *myoſuroides* ſpica cylindrica longiſſima, glumis glabris; culmo ſuberecto. *Hudſon Fl. Angl. p.* 23.

ALOPECURUS *Agreſtis* culmo ſpicato erecto, glumis lævibus. *Lin. Syſt. Vegetab. p* 93. *Sp. Pl. p.* 89.

ALOPECURUS culmo erecto, ſpicato, calyce ciliato. *Haller hiſt. helv. p.* 249.

GRAMEN Typhoides ſpica anguſtiore. *Bauhin Pin.* 4.

GRAMEN cum cauda muris purpuraſcente. *I. Bauhin.* 2. *p.* 473.

GRAMEN ſpicatum, ſpica cylindracea tenuiſſima longiore. *Scheuch. Gram.* 69.

GRAMEN *myoſuroides* majus, ſpica longiore, ariſtis rectis. *Raii Syn. p.* 397, The greater Mouſe-tail Graſs.

GRAMEN alopecuroides ſpica longa majus et minus. *Parkinſon* 1169.

GRAMEN alopecuroides minus. *Gerard emac.* 10. *Lightfoot Fl. Scot. p.* 91. *Schreber. Gram.* 140. *t.* 19. *fig.* 2.

RADIX annua, fibroſa, fuſca.

CULMUS pedalis, erectus, baſi ſæpe infractus, rigidiuſculus, teres, geniculatus.

FOLIA triuncialia, ad duas lineas lata, lævia, ſtriata, baſi membranâ obtuſâ inſtructa.

SPICA longa, tenuis, ſubcylindracea, purpuraſcens.

SPICULÆ unifloræ, ovato-acutæ, in ſpicam imbricatim congeſtæ, externe convexulæ, interne planæ, *fig.* 1.

CALYX: GLUMA bivalvis, uniflora; valvulæ ſubæquales, muticæ, nervoſæ, *baſi annulo cinctæ*, *fig.* 2, 3.

COROLLA univalvis, valvulâ calyce paulo longiore, membranaceâ, lævi, *fig.* 4, Ariſtâ recta, e baſi valvulæ exſerta, ſpiculâ duplo fere longiore inſtructa, *fig.* 5.

STAMINA: FILAMENTA tria, capillaria, erecta, valvulis calycinis duplo longiora: ANTHERÆ oblongæ, utrinque furcatæ, *fig.* 6.

PISTILLUM: GERMEN minimum, *fig.* 7: STYLUS brevis, baſi tumidus, *fig.* 8: STIGMATA duo, ſetacea villoſa apice reflexa, *fig.* 9.

SEMEN unicum, minimum, ſubrotundum, corolla et calyce obveſtitum, *fig.* 10.

ROOT annual, fibrous, and brown.

STALK a foot high, upright, often crooked at bottom, ſtiffiſh, round, and jointed; the joints ſmooth and purple.

LEAVES about three inches long and two lines broad, ſmooth, ſtriated, furniſhed at bottom with an obtuſe membrane.

SPIKE long, ſlender, ſomewhat cylindrical, and purpliſh.

SPICULÆ uniflorous, of a pointed oval ſhape, lying cloſely one over another in a ſpike, externally roundiſh, internally flat, *fig.* 1.

CALYX: a GLUME of two valves, containing one flower; the valves nearly equal, not terminated by any ſhort Ariſta, ſtrongly rib'd, and *ſurrounded at bottom by a ring*, *fig.* 2, 3.

COROLLA of one valve, the valve a little longer than the calyx, membranous, and ſmooth, *fig.* 4, furniſhed with a ſtraight Ariſta, which proceeds from the baſe of the valve, and is nearly twice the length of the ſpicula, *fig.* 5.

STAMINA: three FILAMENTS, very fine, upright, twice the length of the valves of the calyx: ANTHERÆ oblong, and forked at each end, *fig.* 6.

PISTILLUM: GERMEN very ſmall, *fig.* 7: STYLE ſhort, ſwelled at bottom, *fig.* 8: STIGMATA two, tapering, villous, bent back at top, *fig.* 9.

SEED one, very minute, encloſed by the corolla and calyx, *fig.* 10.

THE *Field Foxtail Graſs*, with reſpect to agriculture, may be conſidered rather as a weed than as an uſeful paſture graſs.

It is very common in cultivated ground; and often abounds ſo much in corn fields, as to be prejudicial, among rubbiſh, and on banks by the ſides of fields, it is alſo frequently found; but ſcarce ever in meadows.

It flowers early, and continues to bloſſom till Autumn; and comes into bloom the quickeſt, after being ſown, of any graſs that I have hitherto noticed.

It is diſtinguiſhed from the other ſpecies of the ſame genus, by its long ſlender ſpike, which tapers to a point, and has ſome reſemblance to a mouſes tail, whence J. BAUHINE's and Mr. HUDSON's names. This ſpike is generally of a purpliſh colour, at leaſt on that ſide which is moſt expoſed to the ſun; though ſometimes the whole ſpike appears of a whitiſh colour. The form of the ſpike, and its place of growth, will, in general, point out this ſpecies plainly enough. But if theſe ſhould be found deficient, the ſtudent may have recourſe to the annulus or ring, which ſurrounds the baſe of each ſpicula, *vid. fig.* 3.

I have found this ſpecies effected with the diſeaſe called *Ergot*, deſcribed under the *Flote Feſcue Graſs*.

Bromus hirsutus

Sansom Sculp

BROMUS HIRSUTUS. HAIRY-STALK'D BROME-GRASS.

BROMUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Spicula* oblonga, teres, diſticha; ariſta infra apicem.

Raii Syn. Gen. 27. GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

BROMUS *hirſutus* panicula nutante ſcabra, ſpiculis teretibus ſublinearibus decemfloris, ariſtis rectis, vaginis foliorum hirſutis.

BROMUS *ramoſus* panicula nutante ſcabra, ſpiculis linearibus decemfloris, ariſta longioribus, foliis ſcabris. *Hudſon Fl. Angl. p.* 40.

BROMUS foliis hirſutis, per oras aſperrimis, locuſtis glabris, teretibus, novemfloris. *Haller hiſt. n.* 1503.

BROMUS *giganteus*. *Scopoli Flor. Carn.* var. 2. villoſa et major.

GRAMEN Avenaceum dumetorum panicula ſparſa. *Raii Syn. p.* 415. *Hiſt. Plant. p.* 1289. Buſh or Wood Oat-Graſs, with a ſparſed panicle.

GRAMEN Avenaceum dumetorum paniculatum majus hirſutum. *H. Ox.* 3. 213. 27.

RADIX perennis, plurimis fibris, flexuoſis, flaveſcentibus inſtructa.

CULMUS tripedalis, ad orgyalem aut etiam ſupra, erectus, tribus plerumque nodis articulatus, ſolidus, ſtriatus.

FOLIA: *Vagina* ſtriata, *pilis longis, crebris, rigidiuſculis, deorſum verſis hirſuta: Folia* ipſa pedalia, ſemuncialia, deflexa, ſtriata, rarioribus et brevioribus pilis iiſque ad margines et mediam coſtam præcipue donata.

PANICULA pedalis, ſparſa, rami binati aut ternati, patentes, nutantes, ſcabri, ſæpe flexuoſi.

SPICULÆ plerumque binæ, ſeſquiunciales, tenues, teretiuſculæ, rectæ, vix hirſutæ, decemfloræ, ad baſin annulo diaphano notatæ, *fig.* 3: ARISTÆ breves, ſcabræ, rectiuſculæ, *fig.* 1.

CALYX: GLUMA bivalvis, *fig.* 2; valvulis inæqualibus, majore concavâ, interne nitidâ, trinerve, mucronata, nervis ſcabris, minore unicarinatâ acuminatâ.

COROLLA: GLUMA bivalvis, valvulis inæqualibus, exteriore trinerve, nervis exſtantibus, nervo medio in Ariſtam rectiuſculam Corollâ breviorem deſinente, interiore planiuſculâ, ciliatâ, breviore, *fig.* 4, 5, 6.

NECTARIUM GLUMULÆ duæ ad baſin Germinis, *fig.* 8.

STAMINA: FILAMENTA tria, capillaria: ANTHERÆ bifurcæ, flavæ, *fig.* 7.

PISTILLUM: GERMEN ſubovatum, baſi nudum, apice villoſum: STYLI duo, uſque ad baſin ramoſi, *fig.* 10.

SEMEN planiuſculum, ariſtatum, glumis adhærentibus, *fig.* 11, 12, 13.

ROOT perennial, furniſhed with numerous, crooked, yellowiſh fibres.

STALK from three to ſix feet high, or more, upright, conſiſting generally of three joints, ſolid and finely grooved.

LEAVES: the *ſheath* ſtriated, *covered with numerous long hairs, which are ſomewhat rigid, and bend backwards*: the *Leaves* themſelves a foot long, and half an inch broad, beſet with fewer and ſhorter hairs, and thoſe chiefly at the edges and midrib.

PANICLE a foot long, ſpreading, the branches growing two or three together, hanging down, rough, and often crooked.

SPICULÆ generally growing two together, an inch and a half long, ſlender, roundiſh, ſtraight, ſcarcely hirſute, containing ten flowers, and marked at the baſe with a pellucid ring, *fig.* 3. The ARISTA ſhort, rough, and nearly ſtraight, *fig.* 1.

CALYX: a GLUME of two valves, *fig.* 2; the valves unequal; the larger one concave, and ſhining within, having three ribs, and terminating in a ſhort point, the ribs rough; the ſmaller one having only one rib, and a more tapering point.

COROLLA: a GLUME of two valves, the valves unequal, the exterior one having three prominent ribs, the middle one of which terminates in a ſtraightiſh Ariſta, ſhorter than the Corolla; the inner one flattiſh, edged with hairs, and ſhorter than the other, *fig.* 4, 5, 6.

NECTARY; two little GLUMES at the baſe of the Germen, *fig.* 8.

STAMINA: three FILAMENTS, very fine: ANTHERÆ forked and yellow, *fig.* 7.

PISTILLUM: GERMEN ſomewhat oval, naked at bottom, at top villous: STYLES two, branched quite to the bottom, *fig.* 10.

SEED flattiſh, terminated by an Ariſta, the Glumes adhering to it, *fig.* 11, 12, 13.

THAT the plant here figured, is not the *Bromus ramoſus* of LINNÆUS, I have learned from Dr. SOLANDER and Mr. BANKS, whoſe authority in this matter will not be controverted.

I have therefore called it *hirſutus*, from a wiſh that a trivial name might be given it, which ſhould not only characterize the plant, but at the ſame time, diſtinguiſh it from a Graſs which is undoubtedly often miſtaken for it, as it frequently grows with it, is nearly of the ſame height, and flowers about the ſame time: I mean the *Bromus giganteus* of LINNÆUS, figured by SCHREBER, the leaves and ſtalks of which are *perfectly ſmooth.*

The *Bromus hirſutus* is the talleſt of our Engliſh graſſes, often exceeding ſix feet in height, which renders it a very conſpicuous graſs. The *Feſtuca elatior*, and *Bromus giganteus*, will however often grow nearly as high in particular ſituations.

It occurs in moſt of our hedges in the environs of London, particularly about *Hampſtead*; abundantly alſo in *Kent*; and flowers in June and July.

Excluſive of its height before mentioned, it is diſtinguiſhed from all our other graſſes by the hairineſs of its ſtalk, or rather the ſheaths of the leaves which cover it; and this, ſo far as I have hitherto obſerved, is an infallible criterion.

It appears to be too coarſe a graſs to be cultivated for cattle; and we do not learn that it has been applied to any other purpoſes.

Galium aparine

GALIUM *APARINE*. CLEAVERS or GOOSE GRASS.

GALIUM *Linnæi. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cor. 1-petala, plana. *Sem.* 2, subrotunda.

Raii Gen. 12. HERBÆ STELLATÆ.

GALIUM *Aparine* foliis octonis lanceolatis, carinis scabris retrorsum aculeatis, geniculis villosis, fructibus hispidis. *Linnæi Syst. Vegetab. p.* 127. *Sp. Pl.* 157. *Flor. Suecic. p.* 45.

GALIUM caule ferrato, foliis senis, linearibus, lanceolatis, serratis, petiolis unifloris. *Haller hist. helv. n.* 723.

GALIUM *Aparine. Scopoli Fl. Carniol. n.* 157.

APARINE vulgaris. *Bauhin Pin.* 334.

APARINE *Gerard emac.* 1122. *Parkinson* 567. *Raii Syn. p.* 225, Cleavers or Goose-Grass. *Hudson Fl. Angl. p.* 57. *Oeder Flor. Dan. icon.* 495. *Lightfoot Flor. Scot. p.* 117.

RADIX annua, fibrosa.

CAULIS tetragonus, angulis retrorsum aculeatis, debilis, fragilis, geniculatus, basi articulorum villosus, ramosissimus, ad quatuor et ultra pedes altus, proxima quæque scandens, adhærescensque.

RAMI oppositi.

FOLIA sena ad octona, lanceolato-linearia, mucronata, superne scabra, inferne glabra margine et carina retrorsum aculeatis.

FLORES pauci, parvi, albidi, petiolis scabris insidentes.

CALYX nullus.

COROLLA minima, monopetala, rotata, albida, quadripartita, laciniis ovato-acutis, *fig.* 1.

STAMINA: FILAMENTA quatuor, brevia, alba: ANTHERÆ luteæ, *fig.* 2.

PISTILLUM: GERMEN didymum, inferum, villosum: STYLI duo Corollâ breviores: STIGMATA globosa, *fig.* 4, 5, 6.

PERICARPIUM: BACCÆ duæ, siccæ, globosæ, coalitæ, hispidæ, aculeis recurvis, *fig.* 7.

SEMINA solitaria, reniformia, magna.

ROOT annual, fibrous.

STALK quadrangular, the angles furnished with aculeï or prickles, which bend backward, weak, brittle, and jointed; the bottom of the joints villous, very much branched, growing to four feet or more high, climbing and adhering to every plant near it.

BRANCHES opposite.

LEAVES growing six or eight together, of a shape betwixt lanceolate and linear, terminating in a point, rough on the upper side, on the under side smooth, the edge and midrib, or keel rough, with sharp prickles bending backwards.

FLOWERS few, small, and whitish, sitting on rough foot-stalks.

CALYX wanting.

COROLLA very minute, monopetalous, wheel-shaped, of a whitish colour, divided into four oval pointed segments, *fig.* 1.

STAMINA: four short white FILAMENTS: ANTHERÆ yellow, *fig.* 2.

PISTILLUM: GERMEN double, below the Corolla, villous: STYLES two, shorter than the Corolla: STIGMATA globular, *fig.* 4, 5, 6.

SEED-VESSEL: two dry globular BERRIES, slightly joined together, rough with prickles bending back at the point, *fig.* 7.

SEEDS single, somewhat kidney shaped, and large.

THIS plant has most probably obtained its name of *Cleavers*, from its cleaving or adhering to whatever it comes in contact with, which it is in a peculiar manner enabled to do, by its hooked prickles; and that of *Goose-Grass* from its being a favourite food of Geese.

It abounds in all cultivated ground, and by its quick growth, is apt to overpower many plants both in the garden and field. Young quickset hedges, in a particular manner, should be carefully freed from it. It is an early blowing plant, and produces its seed from June to September.

DIOSCORIDES observes, that the shepherds made use of it as a strainer to filter their milk through.

If the accounts given of it, by writers on the Materia Medica, are to be depended on, it is not without considerable medicinal powers.

The expressed juice of the seeds, stalks, and leaves, are powerful against the bites of vipers and spiders; and the same dropt into the ears, cures the pain of them; *Raii hist. p.* 484.

The herb mixed with lard, dissolves scrophulous swellings; *idem.*

The tops are an ingredient in spring broth, for purifying the blood; *Rutty Mater. Med.*

The seeds have been made use of by some instead of coffee; *idem.*

A strong decoction of the herb, taken to the quantity of twelve ounces, morning and evening, has brought away gravel in many cases; *idem.*

The root eaten by birds, has tinged their bones of a red colour, as in experiments made with madder; *idem.*

A decoction of the plant has proved highly serviceable in a simple gonorrhœa; *D. Palmer apud Dale.*

Of late this plant has been much celebrated in scrophulous and cancerous sores: but experiments carefully made with it, in St. Thomas's Hospital, have not turned out in its favour.

It is eaten by horses, kine, sheep, and goats, but refused by swine; *Linn. Amæn. Acad.*

The Calyx in this species, is certainly wanting.

Plantago lanceolata

PLANTAGO LANCEOLATA. NARROW-LEAVED PLANTAIN OR RIBWORT.

PLANTAGO *Linnæi Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. 4-fidus. *Cor.* 4-fida: limbo reflexo. *Stamina* longiſſima. *Caps.* 2-locularis, circumſciſſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

PLANTAGO lanceolata foliis lanceolatis, ſpica ſubovata nuda, ſcapo angulato. *Linn. Syſt. Vegetab. p.* 131.

PLANTAGO foliis lanceolatis quinquenerviis, ſcapo nudo, ſpica ovata. *Haller hiſt. n.* 656.

PLANTAGO *lanceolata. Scopoli Fl. Carniol. p.* 108. *n.* 163.

PLANTAGO anguſtifolia major. *Bauhin Pin.* 189.

PLANTAGO quinquenervia. *Gerard emac.* 422.

PLANTAGO quinquenervia major. *Parkinſon* 495. *Raii Syn. p.* 314, Ribwort or Ribwort-Plantain. *Hudſon Fl. Angl. p.* 52. *Oeder Fl. Dan. icon.* 437.

RADIX perennis, fuſca, fibris multis inſtructa, per ætatem præmorſa.

FOLIA longe petiolata, baſi purpurea, lanuginoſa, lanceolata, quoad latitudinem inſigniter variantia, quinquenervia, rariter dentata, hirſutula, erecta, nonnunquam vero patentia.

SCAPUS foliis longior, ſimplex, ſulcato-anguloſus, ſubtortuoſus, erectus.

SPICÆ ovato-oblongæ, nigricantes.

BRACTÆA ſingulo floſculo impoſita, ovato-acuminata, concava, *fig.* 1.

CALYX: PERIANTHIUM triphyllum, foliolis inæqualibus, duo lateralia cymbiformia, acuta, *fig.* 3, dorſale ovatum, obtuſum, emarginatum, lineis duabus viridibus notatum, *fig.* 2.

COROLLA monopetala, tubuloſa, membranacea, cylindraceo-globoſa, limbus quadripartitus, laciniis ovato-acutis, patentibus, dempto calyce reflexis, *fig.* 4.

STAMINA: FILAMENTA quatuor longiſſima: ANTHERÆ albidæ aut flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: STYLUS filiformis, ſtaminibus dimidio brevior: STIGMA ſimplex, *fig.* 6.

PERICARPIUM: CAPSULA ovata, bilocularis, circumſciſſa, diſſepimento libero, *fig.* 7, 8.

SEMINA duo, oblonga, nitida, ſuccinei coloris, hinc convexa inde concava, *fig.* 9, 10, 11.

ROOT perennial, of a brown colour, furniſhed with numerous fibres, when grown old appearing as if bitten off.

LEAVES ſtanding on long foot-ſtalks, purple and woolly at bottom, lanceolate, varying remarkably in their breadth, having five ribs, and a few teeth at the edges, ſomewhat hairy, upright, but ſometimes ſpreading.

FLOWERING-STALK longer than the leaves, ſimple, angular and grooved, ſlightly twiſted and upright.

SPIKES of an oval oblong ſhape and blackiſh colour.

BRACTEÆ or floral leaf, placed under each floſcule, oval-pointed, and concave, *fig.* 1.

CALYX: a PERIANTHIUM of three unequal leaves, the two ſide ones boat-ſhaped, and pointed, *fig.* 3; the back leaf oval, obtuſe, emarginate, *fig.* 2, and marked with two green lines.

COROLLA monopetalous, tubular, membranous, of a form betwixt globular and cylindrical; the limb quadripartite; the ſegments of an oval pointed ſhape, and ſpreading, on the removal of the calyx turning back, *fig.* 4.

STAMINA: four very long FILAMENTS: ANTHERÆ white or yellowiſh, *fig.* 5.

PISTILLUM: GERMEN oval: STYLE filiform, half the length of the ſtamina: STIGMA ſimple, *fig.* 6.

SEED-VESSEL: an oval CAPSULE of two cavities, dividing horizontally in the middle, the diſſepimentum or partition looſe, *fig.* 7, 8.

SEEDS two, oblong, ſhining, of an amber colour, convex on one ſide and concave on the other, *fig.* 9, 10, 11.

THE Farmers in general conſider this ſpecies of *Plantain* as a favourite food of ſheep, and other cattle, hence it is frequently recommended in the laying down of meadow and paſture land; and the ſeed is for that purpoſe kept in the ſhops. How far the predilection of cattle for this herb is founded in truth we cannot at preſent determine; nor do we pretend to ſay how far it is œconomical (ſuppoſing the fact to be ſo) to ſubſtitute this plant in the room of others which produce a much greater crop, and which they ſhew no averſion to. We ſhould be rather inclined to think, that *Plantain* (or *Rib-Graſs* as it is called) ſhould be but ſparingly made uſe of, particularly if the Farmers chief aim be a crop.

When the *Plantain* grows among paſturage, its leaves are drawn up to a conſiderable height: but when it occurs in a dry and barren ſoil, they are ſhorter, broader, and more ſpread on the ground; and ſometimes they aſſume a ſilvery hue.

It grows ſpontaneouſly by the ſides of roads, and in dry paſtures; flowering early in the ſummer.

Plantago major

PLANTAGO MAJOR. COMMON PLANTAIN.

PLANTAGO *Linnæi. Gen. Pl.* TETRANDRIA MONOGYNIA.
Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

PLANTAGO *major* foliis ovatis glabris, ſcapo tereti, ſpica floſculis imbricatis. *Lin. Syſt. Vegetab. p.* 131. *Spec. Plant. p.* 163. *Fl. Suecic. n.* 129.

PLANTAGO foliis petiolatis, ovatis, glabris; ſpica cylindrica. *Haller. hiſt. Helv. n.* 660.

PLANTAGO *major. Scopoli. Fl. Carniol. n.* 161.

PLANTAGO latifolia ſinuata. *Bauhin pin.* 189.

PLANTAGO latifolia *Ger. emac.* 419.

PLANTAGO latifolia vulgaris. *Parkinſon.* 493. *Raii Syn.* 314. Great Plantain or Waybread. *Hudſon Fl. Angl. p.* 51. *Oeder. Fl. Dan. ic.* 461. *Lightfoot. Fl. Scot. p.* 117.

RADIX vetuſta pollicaris, præmorſa, plurimis fibris albidis alte demiſſis, terram firmiter apprehendens.

FOLIA petiolata præmorſa, ovata, ſeptemnervia, glabra, juniora vero hirſutula, palmaria, margine minutim remoteque dentata.

PETIOLI longi, ſubtus convexi, ſupra concavi, baſi ſubvaginati.

SCAPI teretes, erecti, pubeſcentes, foliis longiores.

SPICÆ cylindricæ, longæ, floribus undique imbricatæ.

BRACTEA lanceolata, concava, ſub ſingulo floſculo. *fig.* 1.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, obtuſis, lævibus, ſubæqualibus, perſiſtentibus. *fig.* 2.

COROLLA monopetala, perſiſtens, marceſcens; TUBUS cylindrico-globoſus, brevis, *laciniis* ovato-acutis, reflexis. *fig.* 3.

STAMINA: FILAMENTA quatuor, capillaria, patentia, corollâ multo longiora; ANTHERÆ purpureæ, biloculares, ſingulo loculo baſi mucrone terminato. *fig.* 4.

PISTILLUM: GERMEN ovatum; STYLUS filiformis, ſtaminibus brevior, villoſus; STIGMA ſimplex. *fig.* 5. 6.

PERICARPIUM: CAPSULA ovata, circumſciſſa, fuſca, continens SEMINA circiter 20 inæqualia, fuſca. *fig.* 7. 8. 9. 10.

ROOT when old the thickneſs of ones thumb, ſtumped, laying ſtrong hold of the earth by its fibres, which ſtrike deeply into it and are of a whitiſh colour.

LEAVES ſtanding on footſtalks, oval, having ſeven ribs, ſmooth, but ſomewhat hairy when young, about four fingers in length, the edge minutely and remotely indented.

FOOT-STALKS of the leaves long, convex on the under ſide, concave above, each forming a kind of ſheath at its baſe.

FLOWER-STALKS, round, upright, pubeſcent, and longer than the leaves.

SPIKES cylindrical, long, ſurrounded on every ſide with flowers lying one over another.

BRACTEA lanceolate, and hollow, under each flower. *fig.* 1.

CALYX: a PERIANTHIUM of four leaves, which are oval, concave, obtuſe, ſmooth, nearly equal and continuing. *fig.* 2.

COROLLA monopetalous, continuing, of a withered appearance; TUBE of a cylindrical globular form, and ſhort; the SEGMENTS oval, pointed, and turned back. *fig.* 3.

STAMINA: FILAMENTS four, very ſmall, ſpreading, much longer than the corolla; ANTHERÆ purple, bilocular, each cell terminating at bottom in a point. *fig.* 4.

PISTILLUM: GERMEN oval; STYLE filiform, ſhorter than the Stamina, villous; STIGMA ſimple. *fig.* 5. 6.

SEED-VESSEL: an oval CAPSULE, dividing horizontally in the middle, and containing about 20 unequal brown SEEDS. *fig.* 7. 8. 9. 10.

This ſpecies of *Plantain* grows plentifully in Meadows, Gardens, and by the ſides of Paths, and ſeems to flouriſh moſt in places moderately trodden on, whence perhaps its name of *Way-bread.*

In rich ground the leaves often grow to an enormous ſize; and in gardens we often find cultivated, a very ſingular and monſtrous variety of this plant, the *Plantago roſea* of ſome botaniſts, or Roſe Plantain of the Gardeners, in which the flowers appear to be converted into leaves, which ſpread open ſomewhat like a roſe.

Cattle in general appear very readily to eat the leaves, and the ſeeds are well known to afford food to many of the ſmall birds.

It uſed to be held in conſiderable eſteem as a Medicine of the vulnerary kind: In the preſent practice the diſtilled water is ſometimes made uſe of, and chiefly in ulcerations of the Mouth and Throat. By the common people the leaves are often applied to freſh wounds, and burns.

It differs remarkably in the number of its ſeeds from the *Plantago lanceolata*, in which we conſtantly find two large ſeeds; but in this I have moſt commonly found about twenty ſmall ones; yet what is very extraordinary, RAY and SCOPOLI mention its having only two.

SAGINA ERECTA. UPRIGHT PEARLWORT.

SAGINA *Linnæi Gen. Pl.* TETRANDRIA TETRAGYNIA.

Cal. 4-phyllus. *Petala* 4. *Caps.* 1 locularis, 4 valvis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAGINA *erecta* caule erecto ſubunifloro. *Linn. Syſt. Vegetab. p.* 142. *Sp. Pl. p.* 185.

ALSINELLA foliis caryophylleis. *Cat. Giſs.* 47.

SAGINA ſcapis unifloris. *Guett. Stamp. p.* 276. *Dalib. Paris. p.* 56.

ALSINE verna glabra. *Magn. Monſp.* 14. *Vaill. Paris.* 6. *t.* 3. *fig.* 2. *Raii Syn. fig.* 4. *t.* 15. *p.* 344, the leaſt Stich-wort.

Hudſon. Fl. Angl. ed. 2. *p.* 73.

Lightfoot. Fl. Scot. p. 125.

RADIX annua, ſimplex, fibroſa.

CAULES plerumque plures, ſupra terram expanſi, aſcendentes, bi aut triunciales, teretes, purpuraſcentes, læves, geniculati, uniflori, biflori aut etiam triflori.

FOLIA glauca, inferiora linearia, ſeſſilia, rigida, lineâ longitudinali exarata, caulina connata, ſæpe recurvata, latiora, magiſque acuminata.

CALYX: PERIANTHIUM tetraphyllum, perſiſtens, foliolis ovato acuminatis, erectis, plerumque clauſis, margine membranaceis albidis, lævibus, glaucis, *fig.* 1.

COROLLA: PETALA quatuor calyce breviora, alba, oblonga, obtuſa, ſubſtriata, apice indiviſa, *fig.* 2, auct.

STAMINA: FILAMENTA quatuor, intra petala locata, petalis paulo breviora, ſetacea: ANTHERÆ ſubrotundæ, didymæ, flaveſcentes, *fig.* 3, 4.

PISTILLUM: GERMEN ovatum: STYLUS breviſſimus, longitudine ſtaminum: STIGMATA quatuor, villoſa, reflexa, *fig.* 5, 6.

PERICARPIUM: CAPSULA oblongo ovata, membranacea, unilocularis, univalvis, calyce paulo longior, ore plerumque decemdentato, *fig.* 7, 9, *fig.* 8, auct.

SEMINA plurima, e fuſco aurantiaca; ſubreniformia, ſcabra, *fig.* 10, 11.

ROOT annual, ſimple, and fibrous.

STALKS for the moſt part ſeveral, expanded on the earth, and afterwards riſing upright, from two to three inches high, round, purpliſh, ſmooth, jointed, ſupporting from one to three flowers.

LEAVES glaucous; the lower ones linear, ſeſſile, rigid, grooved; thoſe on the ſtalk uniting at their baſe, often bent back, broader, and more pointed.

CALYX: a PERIANTHIUM of four leaves, permanent, the leaves oval and pointed, upright, generally cloſed, membranous and whitiſh on the edges, ſmooth and glaucous.

COROLLA: four PETALS ſhorter than the calyx, white, oblong, obtuſe, ſomewhat ſtriated, and undivided at top, *fig.* 2. magnified.

STAMINA: four FILAMENTS placed between the petals, and a little ſhorter than the petals, ſetaceous: ANTHERÆ roundiſh, double, of a yellowiſh colour, *fig.* 3, 4.

PISTILLUM: GERMEN oval: STYLE very ſhort, the length of the ſtamina: STIGMATA four, villous, and turning back, *fig.* 5, 6.

PERICARPIUM: an oblong, oval, membranous CAPSULE, of one cavity and one valve, a little longer than the calyx, the mouth opening generally with ten teeth, *fig.* 7, 9. *fig.* 8, magn.

SEEDS numerous, of an orange brown colour, ſomewhat kidney-ſhaped, and rough on the ſurface, *fig.* 10, 11.

IN treating of this little plant, we have been rather at at loſs whether to conſider it as a new genus, or arrange it with the *Sagina* of LINNÆUS: for though it agrees with the *Sagina* in ſome of its moſt ſtriking characters, ſuch as having a Calyx and Corolla each conſiſting of four leaves, together with four Stamina and Piſtilla, yet in its ſeed-veſſels, which probably LINNÆUS might not have ſeen in a perfect ſtate, it greatly reſembles a *Ceraſtium*; while the whole plant, in its habit and glaucous appearance, approaches nearly to the *Stellaria Holoſtea*. As there are but few genera however, whoſe ſpecies do not vary conſiderably in the parts of fructification, we have thought it moſt eligible to continue it a *Sagina*; eſpecially as it retains thoſe characters, which obviouſly diſtinguiſh it from any of the Decandrous plants.

We meet with it abundantly on moſt of the Heaths about London, particularly on *Black-heath*. It flowers in April, and ripens its ſeed in May. The calyx never opens far, ſo that the bloſſoms are not ſuffered fully to expand.

If the ſeaſon prove dry, as hath been moſt unuſually the caſe this year, 1779, the ſtalk is generally ſimple; but if the ground be moiſt, it throws out many ſtalks, which firſt ſpread on the earth, and afterwards become upright, as is repreſented in the middle figure.

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Sagina erecta Sansom Sculp

Convolvulus arvensis

CONVOLVULUS ARVENSIS. FIELD CONVOLVULUS.

CONVOLVULUS *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. campanulata, plicata. *Stigm.* 2. *Caps.* 2-locularis: loculis diſpermis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CONVOLVULUS *arvenſis* foliis ſagittatis utrinque acutis, pedunculis ſubunifloris. *Lin. Syſt. Veget. p.* 168. *Sp. Pl. p.* 218. *Flor. Suecic. p.* 64.

CONVOLVULUS foliis ſagittatis, lateſcentibus, petiolis unifloris, ſtipulis remotis ſagittatis. *Haller. hiſt. helv. n.* 664.

CONVOLVULUS *arvenſis. Scopoli Fl. Carn. n.* 219.

CONVOLVULUS minor arvenſis. *Bauhin. pin.* 294.

CONVOLVULUS minor vulgaris. *Parkinſon.* 171.

SMILAX lævis minor. *Gerard emac.* 861.

Raii Syn. p. 275, Small Bindweed.

Hudſon Fl. Angl. ed. 1. *p.* 74. *ed.* 2. *p.* 88.

Lightfoot Fl. Scot. p. 140.

Oeder Fl. Dan. icon. 459.

RADIX perennis, craſſitudinis pennæ coracis, teres, albida, lacteſcens, repens, vix extirpanda.

CAULES plurimi, tenues, tortuoſi, procumbentes, ramoſi, plantas vicinas contorquendo adſcendentes et ſæpe ſuffocantes.

FOLIA alterna, haſtata, lævia, poſtice acutè hamata.

PETIOLI foliis breviores, inferne convexi, ſuperne canaliculati.

PEDUNCULI uniflori, biflori aut triflori.

CALYX: PERIANTHIUM quinquepartitum, minimum, perſiſtens, foliolis ovatis, obtuſiuſculis, *fig.* 1.

COROLLA monopetala, campanulata, patens, plicata, albo et rubro eleganter picta, interdum penitus alba, *fig.* 2.

STAMINA: FILAMENTA quinque ſubulata, alba, Corollâ dimidio breviora: ANTHERÆ ſubſagittatæ, albæ, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, glandulâ cinctum: STYLUS filiformis, Staminibus paulo longior: STIGMATA duo, oblonga, latiuſcula, *fig.* 4, 5, 6.

PERICARPIUM: CAPSULA ſubrotunda, mucronata.

SEMINA anguloſa, fuſca.

ROOT perennial, the thickneſs of a crow quill, round, white, milky, creeping ſo as ſcarce to be eradicated.

STALKS numerous, ſlender, twiſted, procumbent, branched, twining round, and often ſuffocating the plants growing near them.

LEAVES alternate, haſtate, ſmooth, running out into two points behind.

LEAF-STALKS ſhorter than the leaves, on the lower part convex, on the upper part channeled.

FLOWER-STALKS ſupporting one, two, or three flowers.

CALYX: a PERIANTHIUM deeply divided into five ſegments, minute and permanent, the leaves oval and ſomewhat blunt, *fig.* 1.

COROLLA monopetalous, bell-ſhaped, ſpreading, plaited, elegantly painted with red and white, ſometimes wholly white.

STAMINA: five FILAMENTS, tapering, white, about half the length of the Corolla; ANTHERÆ ſomewhat arrow-ſhaped, and white. *fig.* 3.

PISTILLUM: GERMEN roundiſh, ſurrounded by a gland; STYLE filiform, a little longer than the Stamina; STIGMATA two, oblong, and broadiſh. *fig.* 4. 5. 6.

SEED-VESSEL: a roundiſh, pointed CAPSULE.

SEEDS angular, and brown.

BEAUTIFUL as this plant appears to the eye, experience proves it to have a moſt pernicious tendency in agriculture: the field of the ſlovenly farmer bears evident teſtimony of this; nor is the garden wholly exempt from its inroads.

The following experiment may ſerve to ſhow what precaution is neceſſary in the introduction of plants into a garden, eſpecially when we want them to grow in ſome particular ſituation.

Tempted by the lively appearance which I had often obſerved ſome banks to aſſume, from being covered with the bloſſoms of this *Convolvulus*, I planted twelve feet of a bank, in my garden, which was about four feet in height, with ſome roots of it: it was early in the ſpring, and the ſeaſon was remarkably dry, ſo that I ſcarce expected to ſee them grow; but a wet ſeaſon coming on, ſoon convinced me that my apprehenſions were unneceſſary, for they quickly covered the whole ſurface of the bank, to the almoſt total extirpation of every other plant. It being a generally received opinion, that if a plant was cut down cloſe to the ground, it would thereby be deſtroyed, or at leaſt very much weakened, I was determined to try the validity of this opinion by an experiment, and accordingly, the whole of the *Convolvulus* was cut down ſomewhat below the ſurface of the earth: in about a month, the bank was covered with it thicker than before. I then had recourſe to a ſecond cutting, and afterwards to a third, but all theſe were inſufficient; for now at this preſent writing (Auguſt) the bank is wholly covered with it; nor do I expect to deſtroy it, but by levelling the bank and deſtroying its roots.

This experiment ſeems to determine a matter of no ſmall conſequence in agriculture, viz. that the cutting down theſe plants which have creeping roots, rather tends to make them ſpread farther than deſtroy them; and that nothing ſhort of actual eradication, will effect the latter.

It is ſeldom that this plant is highly prejudicial to meadows, or paſtures; but many fields of corn are every year deſtroyed by it, or rendered of little value.

It flowers in June and July. The bloſſoms vary conſiderably in their colour, being ſometimes quite white, but moſt commonly painted more or leſs, with a lively red.

LINNÆUS's character of this plant, *pedunculis unifloris*, does not always hold good; the flower-ſtalks being frequently branched, and ſupporting two or three flowers.

The leaves ſometimes appear quite narrow, and the bloſſoms have been obſerved to be divided almoſt to the baſe, *vid. Ray's Synopſis, ed.* 3, *p.* 276.

SOLANUM NIGRUM. GARDEN NIGHTSHADE.

SOLANUM *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.
Cor. rotata. *Antheræ* ſubcoalitæ, apice poro gemino dehiſcentes. *Bacca* bilocularis.
Raii Syn. Gen. 26. HERBÆ BACCIFERÆ.
SOLANUM *nigrum* caule inermi herbaceo, foliis ovatis dentato-angulatis, racemis diſtichis nutantibus.
Linnæi Syſt. Vegetab. p. 187. *Sp. pl. p.* 266. *Fl. ſuecic. p.* 71. *Haller. hiſt. v.* 1. *p.* 249. *n.* 576.
SOLANUM nigrum, *Scopoli Fl. Carniol. p.* 258.
SOLANUM officinarum. *Bauhin pin. p.* 166.
SOLANUM vulgare. *Parkinſon.* 346
SOLANUM hortenſe, *Ger. emac.* 339.
Raii Syn. 254. *Hudſon, Fl. angl. p.* 78. *Oeder. Dan.* 460.

Tota planta contuſa tetrum odorem ſpirat.
RADIX annua, ramoſa, albida.
CAULIS pedalis aut bipedalis, ramoſiſſimus, ſubangulaſus ex foliis decurrentibus, ſcabriuſculus, ſolidus, ad geniculos paululum incraſſatus, obſcure viridis, ſeu ex viridi purpureus preſertim ad baſin et ad nodos.

RAMI alterni, cauli ſimiles.
FOLIA alterna, longe petiolata, ſubdecurrentia, ovato-acuta, anguloſo-dentata, hirſutie molli.

FLORES ſubumbellati; PETIOLUS patens *ex intermedio nodorum.*

CALYX: PERIANTHIUM quinquepartitum, foliolis ovatis perſiſtentibus, fructibus maturis paululum reflexis. *fig.* 1.
COROLLA monopetala, ſubrotata, alba, laciniis ovato acutis. *fig.* 2.

STAMINA: FILAMENTA quinque breviſſima, villoſa, alba *fig.* 4: ANTHERÆ oblongæ, flavæ, ſubcoalitæ, bilocùlaris, loculis apice perforatis. *fig.* 5.
PISTILLUM: GERMEN ſubrotundum, viride *fig.* 6; STYLUS ſubulatus, viridis, parte inferiore villoſa *fig.* 7; STIGMA ſubrotundum. *fig.* 8.
PERICARPIUM: BACCA rotunda, primum viridis demum nigra, bilocularis *fig.* 9.
SEMINA plurima, reniformia, flaveſcentia. *fig.* 10.

* The whole plant when bruiſed ſmells very diſagreeably.
ROOT annual, branched, and whitiſh.
STALK from one foot to two feet high, very much branched, ſomewhat angular from the leaves running down the ſtalk, roughiſh, ſolid, ſomewhat ſwelled at the joints, of a dirty green, or rather a purpliſh green colour, particularly at bottom and at the joints.
BRANCHES alternate, like the ſtalk.
LEAVES alternate, ſtanding on long footſtalks, ſlightly running down the ſtalk, of an oval pointed ſhape, angularly indented, with a ſoft hairineſs.
FLOWERS growing in a kind of Umbell; FOOTSTALK of the flowers ſpreading, and *ariſing from the middle of the joint.*
CALYX: a PERIANTHIUM divided into five ſegments, which are oval, continuing, and when the fruit is ripe, turning ſomewhat back. *fig.* 1.
COROLLA monopetalous, ſomewhat wheel-ſhaped, of a white colour, the ſegments oval and pointed. *fig.* 2.
STAMINA: five very ſhort white hairy FILAMENTS, *fig.* 4. ANTHERÆ oblong, yellow, ſomewhat united, of two cavities, each having a hole at the top. *fig.* 5.
PISTILLUM: GERMEN roundiſh, and green *fig.* 6; STYLE tapering, green, the lower part villous; STIGMA roundiſh. *fig.* 8.
SEED-VESSEL: a round berry, firſt green aud afterwards black, of two cavities. *fig.* 9.
SEEDS ſeveral, kidney ſhaped and yellowiſh. *fig.* 10.

In the year 1757, Mr. GATAKER, Surgeon to the Weſtminſter Hoſpital, publiſhed a treatiſe on the internal uſe of *Solanum*, or *Nightſhade*; from an apprehenſion that he had diſcovered a medicine which, under certain regulations, might with perfect ſafety be given; and, as he imagined, with great benefit to mankind in many diſeaſes, where the medical practitioner could do little more than ſympathize with his diſtreſſed patients.

He was induced to make ſome experiments with the *Nightſhades*, from reading an account of a cancerous caſe cured by the infuſion of deadly Nightſhade; but not being able at that particular ſeaſon of the year, to procure the deadly Nightſhade, he was obliged to make uſe of the dried leaves of the *Solanum nigrum, or Garden Nightſhade*, here figured, which he found to be very powerful in its operation; even ſo ſmall a quantity as one grain weight of the leaf, infuſed in about an ounce of boiling water, would ſometimes produce a very conſiderable effect: but two or three grains ſeldom fail'd either to vomit, purge, or ſweat the patient moderately, or to increaſe the quantity of urine. It ſometimes occaſioned a head-ach, giddineſs, dimneſs, and drowſineſs; but its moſt common effects were a heat or warmth diffuſed over the whole body a few hours after taking the medicine, a plentiful ſweat ſucceeding this heat, and a gentle purging the next day: if a ſweat did not break out, an extraordinary diſcharge of urine was the conſequence, which was ſometimes followed likewiſe by a purging: one or more of the natural evacuations were almoſt always increaſed. After premiſing this general account of the action of the medicine, he proceeds to enumerate ſeveral caſes in which this medicine appeared to him to be efficacious: the principal of theſe were, two caſes of a cancerous nature;—a large ill-conditioned ſore of long ſtanding in the leg, attended with fever and inflamation—a violent bruiſe on the loins and hips;—a ſwelling, and ſeveral painful ſores on one leg;—ſeveral ſcrofulous ſores in the thigh and foot;—the body covered with ſcorbutic eruptions;—a malignant corroding ulcer in the back part of the throat;—two caſes of Dropſy;—in ſeveral cancerous caſes where it was made uſe of, very little advantage was reaped. In moſt of the above caſes, the *garden Nightſhade* was made uſe of, between which and the *deadly*, he found, as to their effects, very little difference: he found the medicine to act differently on different conſtitutions; and it was his practice to begin with half a grain of the dried leaf in infuſion, increaſing the doſe according to its effects, and repeating it every ſecond or third night.

He remarks that the *Solanum nigrum* was formerly in uſe for many diſeaſes; yet there were ſome who decried the uſe of it internally: and WEPFER gives an account of three Children poiſoned by it: nevertheleſs ſome authors mention it as uſed in food. But ſurely if an infuſion of a few grains of this plant be capable of producing ſuch violent effects on the human body, thoſe authors muſt have been miſtaken.

About the ſame time, ſome experiments were alſo made by Mr. BROMFIELD, Surgeon to St. Georges and the Lock Hoſpitals; and as the one author ſeems to have written prejudiced in favour of the Medicine, ſo the other ſeems to have had his prejudices againſt it; for we find the experiments of the latter differing widely from thoſe of the former. According to Mr. BROMFIELD, the ſymptoms were not only not relieved, but new ones were often brought on, and the patients health rather injured than benefited. In the ſeveral caſes of inflamation, ulcers, &c. where this medicine had been given, it often occaſioned pains in the ſores, nauſea, complaints of the head, temporary loſs of ſight, delirium, violent vomitings, gripings and purgings, and even death itſelf to one perſon under his own inſpection; though the doſe of the garden Nightſhade did not exceed one grain at a time.

After giving this account, we ſhall leave it to our readers to determine with what propriety it is diſregarded in the preſent practice; and would juſt remark, that from the apparently inconteſtible proofs of its deleterious qualities, perſons cannot be too nice in ſelecting their Pot-herbs, particularly thoſe who make a practice of gathering from Dunghills and Gardens, a ſpecies of *Orach*, by ſome called *Fat-hen*, by others *Lambs-quarters*, &c. as there is ſome diſtant ſimilitude betwixt the two plants, and their places of growth are the ſame.

The figure and deſcription above given, will enable any one to diſtinguiſh this plant. It is an annual, flowering in July, and producing its black berries in Autumn, which moſt probably are alſo poiſonous. It varies in ſize as well as in the hairineſs of its leaves; and the manner of the flowers growing from the middle of each joint is both ſingular and curious.

Solanum nigrum

CHENOPODIUM ALBUM. WHITE GOOSEFOOT.

CHENOPODIUM ALBUM. WHITE GOOSEFOOT.

CHENOPODIUM *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.
Cal. 5 phyllus, 5 gonus.
Cor. o. *Sem.* 1, lenticulare, ſuperum.
Raii. Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHENOPODIUM *album* foliis rhomboideo-triangularibus eroſis poſtice integris, ſummis oblongis, racemis erectis. *Lin. Syſt. Vegetab. p.* 216. *Spec. Plant. p.* 319. *Fl. Suecic. p.* 79.

CHENOPODIUM foliis ſubtus farinoſis, rhomboideis, dentatis, ſuperioribus integerrimis. *Haller. hiſt. n.* 1579.

CHENOPODIUM ſylveſtre opuli folio. *Vaillant, Paris.* 36. t. 7. *fig.* 1.

BLITUM Atriplex ſylveſtris dictum. *Raii Syn. p.* 154. Common wild Orache.

ATRIPLEX folio ſinuato candicante. *Bauh. pin.* 119.

ATRIPLEX ſylveſtris vulgatior ſinuata major. *Parkinſon.* 748.

ATRIPLEX vulgaris *Ger. emac.* 326. *Hudſon. Fl. Angl. p.* 91. *Lightfoot. Flor. Scot. p.* 148.

RADIX annua, fibroſa, alba.
CAULIS erectus, pedalis ad tripedalem, parum flexuoſus, ſubanguloſus et ſtriatus, ſolidus, ramoſus, lævis, ſubinde purpuraſcens. RAMI alterni.
FOLIA rhomboideo-triangularia, eroſa, poſtice integra, *fig.* 7. glauco-viridia, ſubtus præſertim farinâ copioſe adſperſa, ſummis oblongis minus profunde dentatis, aut etiam integris.

RACEMI axillares, erecti, ſpicati, floribus glomeratim diſpoſitis.
CALYX PERIANTHIUM pentaphyllum, perſiſtens, foliolis ovatis, concavis, margine membranaceis, pulverulentis *fig.* 1. poſtice viſum. auct.

COROLLA nulla.
STAMINA: FILAMENTA quinque, ſubulata, alba, calycis foliis oppoſita et paulo longiora; ANTHERÆ ſubrotundæ, didymæ, flavæ. *fig.* 2.

PISTILLUM: GERMEN orbiculatum; *fig.* 3; STYLUS brevis, bipartitus; STIGMATA obtuſa. *fig.* 4.

SEMEN unicum, lenticulare, læve, caſtancum. *fig.* 6.

ROOT annual, fibrous and white.
STALK upright, from one to three feet high, ſlightly crooked, ſomewhat angular and ſtriated, ſolid, branched, ſmooth, ſometimes of a purpliſh colour. BRANCHES alternate.
LEAVES of a triangular rhomboid figure, deeply and irregularly indented, intire behind, *fig.* 7. of a blueiſh green colour, plentifully covered particularly on the under ſide with a mealy powder, the uppermoſt leaves oblong, leſs deeply indented or even entire.
RACEMI axillary, upright, forming a ſpike of flowers growing in little balls or cluſters.
CALYX: a PERIANTHIUM of five leaves: and continuing, the ſegments oval, hollow, membranous at the edges and powdery *fig.* 1. ſeen on the back part, and magnified.
COROLLA wanting.
STAMINA: five white tapering FILAMENTS oppoſite to and a little longer than the leaves of the Calyx; ANTHERA compoſed of two roundiſh yellow cells. *fig.* 2.
PISTILLUM: GERMEN orbicular; *fig.* 3; STYLE ſhort, divided in two; STIGMATA obtuſe. *fig.* 4.
SEED one, lens-ſhaped, ſmooth and of a cheſnut colour. *fig.* 6.

If any plants ſtand in need of figures to illuſtrate them, rather than deſcriptions, it is ſurely the different ſpecies of *Chenopodium* and *Atriplex*.

By figuring the outline of the leaf of any of theſe plants, we convey to the moſt tranſient obſerver, a perfect idea of its ſhape, without that ambiguity which muſt ever attend the deſcription of leaves ſo irregularly formed, ſo variable, and ſo difficult of definition.

Beſides figures, theſe plants ſeem alſo to require every other kind of elucidation; and if the altering and fixing diſtinct engliſh names to different Genera, be in any caſe juſtifiable, it muſt be here, where three different Genera are called indiſcriminately by the names of *Orach*, *Gooſefoot*, and *Blite*. I have therefore preſumed to call the Genus CHENOPODIUM *Gooſefoot*, and propoſe confining the term *Orach* to ATRIPLEX, and *Amaranth* to AMARANTHUS; the term *Blite*, by which a ſpecies of the laſt mentioned Genus has been called, ſeems moſt applicable to the genus BLITUM.

The *Chnopodium album* is the moſt common with us of the whole genus; it occurs in every Garden, flouriſhes on every Dunghill, and abounds in moſt of our Corn-fields. To the Gardener it is a quick growing troubleſome Weed; to the Farmer it is an injurious one, and generally introduced into his fields by that ſlovenly practice of ſuffering every kind of weed to ſeed on his Dung-heap.

Like the other ſpecies of this Genus, it varies exceedingly in its appearance when young, and when in its ſeeding ſtate. Indeed all theſe plants require that the ſtudent ſhould notice them from the earlieſt to the lateſt periods of their growth; or he never can attain a perfect knowledge of them.

It is whiter in its whole appearance than moſt of the *Chenopodiums*; the leaves being more generally covered with thoſe pellucid particles reſembling meal, which are characteriſtic of theſe Genera.

Mr. LIGHTFOOT noticed its being eaten as a Pot-herb in ſome parts of *Scotland*.

Chenopodium album

Chenopodium viride

CHENOPODIUM VIRIDE. PURPLE-JOINTED GOOSEFOOT.

CHENOPODIUM. *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO, SEU STAMINEO, VEL APETALO POTIUS.

CHENOPODIUM *viride* foliis rhomboideis dentato-ſinuatis, racemis ramoſis ſubfoliatis. *Linnæi Syſt. Vegetab. p.* 216. *Sp. Pl.* 319. *Flora Suecic. p.* 79.

CHENOPODIUM foliis rhomboideis, dentatis, ſubtus incanis. *Haller. hiſt. helv. p.* 267. *n.* 1580.

CHENOPODIUM *viride. Scopoli Fl. Carniol. n.* 280.

Hudſon Fl. Angl. p. 91.

Lightfoot Flora Scot. p. 149. *n.* 6.

I have been cautious in referring to the ſynonyma of authors on this plant, ſeeing they differ ſo much in their opinions reſpecting it; and have rather wiſhed that the plate here given, might ſerve as a reconciliatory reference. LINNÆUS and HALLER both ſeem to doubt its being a ſpecies diſtinct from the *album*, and it muſt be confeſſed there is a great ſimilarity betwixt them; yet if my obſervations are juſt, there is every reaſon to conſider them as two plants perfectly diſtinct.

They agree in this, that they are both annual plants, both grow in the ſame ſoil and ſituations, are nearly alike in their ſize and habit, and both flower about the ſame time; and yet they differ in many reſpects very eſſentially. That which in a more ſtriking manner diſtinguiſhes the *viride* from the *album*, is the greener appearance of the whole plant, the bright red colour at the angles of the joints, which is conſtant, and the ſhape of the leaf, *fig.* 1, which is always much longer than that of the *album*. The *album* is loaded with an appearance of meal, which gives it its white colour; the *viride*, though not deſtitute of it, has it not in that profuſion. When the ſeed are ripe, the tops of the ſtalks, in the *viride*, are more apt to hang down; the parts of the fructification, *fig.* 1, 3, 4, 5, are very ſimilar, but ſmaller; and the calyx is not quite ſo much covered with little globules: the ſeeds of each differs very conſiderably, and affords a very curious and ſatisfactory diſtinction: in the *album* it is perfectly ſmooth, *glaber*; in the *viride* it is ſmaller, and reticulated with impreſſed dots, *reticulatus punctis impreſſis*, *fig.* 6.

Like ſome of the other ſpecies of this Genus it is eaten as a pot-herb.

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Chenopodium polyspermum

CHENOPODIUM POLYSPERMUM. ALL-SEED.

CHENOPODIUM *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5-phyllus, 5-gonus. *Cor.* o. *Sem.* 1. lenticulare, ſuperum.

Raii Syn. Gen. 5. HERBÆFLOREIMPERFECTOSEUSTAMINEO(VELAPETALOPOTIUS.)

CHENOPODIUM *Polyſpermum* foliis integerrimis ovatis, caule erecto, calycibus fructus patulis.

CHENOPODIUM *Polyſpermum* foliis integerrimis ovatis, caule decumbente, cymis dichotomis aphyllis axillaribus. *Lin. Syſt. Vegetab. p.* 216. *Spec. Plant. p.* 231. *Fl. Suecic. p.* 80.

CHENOPODIUM caule erecto, foliis ovatis integris. *Haller hiſt. helv. p.* 266.

CHENOPODIUM *Polyſpermum. Scopoli Fl. Carniol. n.* 279.

BLITUM polyſpermon a ſeminis copia. *Bauhin pin.* 118.
Gerard emac. 325.
Parkinſon 753.

CHENOPODIUM Betæ folio. *Inſt. R. H.* 506.
Raii Syn. p. 157. Upright Blite, or All-ſeed.
Lightfoot Fl. Scot. p. 150.
Hudſon Fl. Angl. ed. 1. *p.* 92. *ed.* 2. *p.* 107.

RADIX annua, fibroſa, rubeſcens.

CAULIS plerumque ſuberectus, pedalis aut bipedalis, tetragonus, lævis; RAMI diffuſi, longiſſimi, cauli ſimiles

FOLIA petiolata, ovata, integerrima, lævia, margine veniſque rubro ſæpe tinctis.

FLORES axillares, ſubcymoſi, Cymis dichotomis, aphyllis.

CALYX: PERIANTHIUM pentaphyllum, concavum, perſiſtens, laciniis ovatis, viridibus, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque baſi latiora, alba, demiſſo polline Calyce longiora; ANTHERÆ ſubrotundæ, didymæ, flavæ, *fig.* 2.

PISTILLUM: GERMEN orbiculatum; STYLUS bipartitus, breviſſimus; STIGMATA obtuſa, *fig.* 3, 4.

PERICARPIUM nullum.

SEMEN orbiculatum, rufum, Calyci patulo innixum, non vero incluſum, *fig.* 5.

ROOT annual, fibrous, and reddiſh.

STALK in general nearly upright, about a foot or two in height, four-cornered and ſmooth; BRANCHES far extended, and like the ſtalk.

LEAVES ſtanding on foot-ſtalks, oval, entire at the edges, ſmooth, the margin and veins often tinged with red.

FLOWERS axillary, forming a kind of Cyma, which divides into two at bottom, and is leafleſs.

CALYX: a PERIANTHIUM of five leaves, concave and permanent, the ſegments oval and green, *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS, broadeſt at the baſe, of a white colour; the Pollen being thrown out, they become longer than the Calyx: ANTHERÆ roundiſh, double, and yellow, *fig.* 2.

PISTILLUM: GERMEN orbicular: STYLE divided into two, very ſhort: STIGMATA blunt, *fig.* 3, 4.

SEED-VESSEL wanting.

SEED orbicular, reddiſh brown, ſupported by the Calyx, which ſpreads open, and does not cover it, *fig.* 5.

ALTHOUGH there are many of the *Chenopodiums* which are not to be diſtinguiſhed without much care and attention, yet ſome are very eaſily made out, of which number is the preſent ſpecies.

Its ſquare ſtalk, which is generally of a bright red colour, its long extended branches, and its reddiſh ſeeds, which are numerous and ſtrikingly viſible, from being only in part covered with the calyx, render this plant ſufficiently obvious.

It is not uncommon in gardens and on dunghills, flowers in July and Auguſt. To the gardener it is a troubleſome annual, but ſcarcely injurious to the farmer.

Fiſh are ſaid to be fond of it, *Lin. Fl. Suecic. ex Loes,* when thrown into fiſh ponds.

Hyacinthus non scriptus

Sansom Sculp.

HYACINTHUS NON SCRIPTUS. ENGLISH HYACINTH.

HYACINTHUS *Linnæi Gen. Pl.* HEXANDRIA MONOGYNIA.

Cor. campanulata: pori 3 melliferi *germinis.*

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

HYACINTHUS *non ſcriptus* corollis campanulatis, ſexpartitis, apice revolutis. *Lin. Syſt. Veget. p.* 276.

HYACINTHUS oblongo flore cœruleus major. *Bauhin Pin.* 43.

HYACINTHUS anglicus. *Gerard. emac.* 111.

HYACINTHUS anglicus belgicus vel hiſpanicus. *Parkinſon. Parad.* 122. *Raii Syn. p.* 373, Engliſh Hyacinth, or Hare-bells.

HYACINTHUS *non ſcriptus*, Hyacinth. *Dioſcoridis. Dod. Ludg.*

Hudſon. Fl. Angl. 123. *ed.* 2. *p.* 141. *Lightfoot. Fl. Scot. p.* 183.

RADIX: bulbus ſubrotundus, magnitudine nucis myriſticæ, candidus, ſucco viſcido repletus, ex ima parte plurimas fibrillas albidas dimittens.

ROOT a roundiſh bulb, the ſize of a nutmeg, of a white colour, and full of a viſcid juice, ſending down from the bottom numerous whitiſh fibres.

SCAPUS nudus, ſemipedalis aut pedalis, erectus, teres, lævis, ſolidus.

STALK naked, from half a foot to a foot in height, upright, round, ſmooth, and ſolid.

FOLIA quatuor, ſex, interdum plura, ſcapo duplo breviora, ſemunciam lata, carinata, concava, lævia, nitida.

LEAVES four, ſix, ſometimes more, twice as ſhort as the ſtalk, about half an inch broad, keeled, hollow, ſmooth, and ſhining.

FLORES octo ad duodecem; ſæpe plures, odorati, cærulei aut violacei, rarius carnei aut albi, ſpicati, ſecundi, nutantes.

FLOWERS from eight to twelve, often more, ſweet ſmelling, of a blue or violet colour, ſeldom fleſh coloured or white, growing in a ſpike, all one way, and hanging down.

BRACTEÆ binæ, ſuberectæ, lanceolatæ, *fig.* 1,

FLORAL-LEAVES two to each flower, lanceolate, and nearly upright, *fig.* 1.

COROLLA ſubcylindracea, ſexpartita, laciniis revolutis, *fig.* 2, 3.

COROLLA almoſt cylindrical, divided into ſix ſegments, the tips of which turn back, *fig.* 2, 3.

STAMINA: FILAMENTA ſex, tria longiora tubum corollæ æquantia, inferne corollæ adnata, ſuperne libera, ſetacea, albida: ANTHERÆ erectæ, incumbentes, ſubſagittatæ, flaveſcentes, *fig.* 4.

STAMINA: ſix FILAMENTS, the three longeſt of which equal the tube of the corolla, below attached to the corolla, above free from it, tapering, and whitiſh: ANTHERÆ upright, incumbent, ſomewhat arrow-ſhaped, of a yellowiſh colour, *fig.* 4.

PISTILLUM: GERMEN conicum, angulato-ſulcatum, albidum: STYLUS corollâ brevior, apice violaceus: STIGMA obtuſum, villoſum, *fig.* 5.

PISTILLUM: GERMEN conical, angular and grooved, of a whitiſh colour: STYLE ſhorter than the corolla, at top of a blueiſh colour: STIGMA blunt and villous, *fig.* 5.

PERICARPIUM: CAPSULA triquetra, trilocularis, trivalvis, valvis ovatis, mucronatis, *fig.* 6.

SEED-VESSEL: a three-cornered CAPSULE, of three cavities and three valves, the valves oval, and terminating in a ſhort point, *fig.* 6.

SEMINA plurima, violacea, nitida, ſubrotunda, *fig.* 7.

SEEDS numerous, of a fine blue colour, and roundiſh ſhape, with a poliſhed ſurface, *fig.* 7.

THE *Hyacinth* is conſidered by the Dutch Floriſts, as the firſt of flowers, and as ſuch ranks in their catalogues; in one of which, viz. that of Meſſrs. VOORHELM and SCHNEEVOGT, of *Haerlem*, for the year 1778, the *Gloria Solis* is marked at a 1000 guilders, eleven of which make one pound ſterling.

The ſpecies which is the object of ſo much care and cultivation, and from whence ſuch numerous and beautiful varieties are produced, is not our Engliſh Hyacinth, but the *Hyacinthus orientalis* of LINNÆUS: nevertheleſs, the preſent ſpecies is often to be met with in gardens, though in a ſtate not much improved, being generally ſingle, and retaining its character of drooping flowers, by which character it is obviouſly diſtinguiſhed from a plant very ſimilar to it, which is much more common in gardens, and flowers at the ſame time; a plant overlooked by LINNÆUS; but named by Mr. BANKS *Scilla campanulata.*

Our meadows, woods, and hedge-rows, are beautifully decorated with the bloſſoms of this plant in the ſpring months. Its ſeeds are not ripened till the end of the year; and thoſe, on being ſown, did not vegetate till the ſecond year.

The term of *non ſcriptus* was applied to this plant by ſome of the earlieſt botaniſts, as may be ſeen in *Bauhin's Pinax*, and *Ray's Hiſt. Plant.* and implies, that the flowers were not marked with any kind of character, which the Hyacinth of the antients is ſuppoſed to have been, *vid. Bauh. Pin. p.* 47. and *Raii. Hiſt. p.* 1155.

The great uncertainty in which the antients have left us, by their vague and imperfect deſcriptions, appears in a ſtrong light, by what can be collected from their writings concerning the HYACINTH FLOWER. Since the revival of letters, commentators and botaniſts, have taken great pains to aſcertain the plant which the antient poets and naturaliſts called by this name; but with what ſucceſs, may be eaſily gathered, when we find them ſeverally fixing upon flowers of ſuch very different appearances as the Martagon, Larkſpur, and Iris, for the true Hyacinth.

The *Hyacinthine hair* of the antients, has alſo engaged the attention of the inquiſitive, ſucceeding poets copying the expreſſion from HOMER, who deſcribes *Ulyſſes* thus, in POPE or BROOME's tranſlation:

" *Back from his brows a length of hair unfurls,*
" *His* hyacinthine locks *deſcend in wavy curls.*
" *As by ſome artiſt, to whom Vulcan gives*
" *His ſkill divine, a breathing ſtatue lives;*
" *By Pallas taught, he frames the wond'rous mould,*
" *And o'er the ſilver pours the fuſile gold;*
" *So Pallas his heroic frame improves*
" *With heav'nly bloom, and like a god he moves.*"

This paſſage is thus imitated by MILTON, in his deſcription of the perſon of *Adam.*

——" *His fair large front and eye ſublime declar'd*
" *Abſolute rule; and* hyacinthine locks
" *Round from his parted forelock manly hung*
" *Cluſtring, but not beneath his ſhoulders broad.*"

It is ſurpriſing that all the commentators ſhould agree, in ſuppoſing HOMER means *black hair* by his alluſion to the *Hyacinth*, when he elſewhere in the Odyſſey, deſcribes *Ulyſſes* with *yellow* or *golden hair*: " Ανθας δ' εκ κεφαλης ολεσω τριχας," which correſponds with the ſimile in the above mentioned quotation, where the poet compares the hair flowing on his hero's ſhoulders, to *gold* inlaid on *ſilver*. But perhaps HOMER did not intend to expreſs any colour by alluding to the *Hyacinth*: this line in the original, " Ουλας ηκε κομας υακινθινο ανθει ομοιας," may be literally tranſlated thus:

" *She let down his hair curled like a Hyacinth flower.*"

The *Hyacinthus comoſus*, and its variety the *Hyacinthus monſtroſus*, or *feathered Hyacinth*, bear a ſtrong reſemblance to *curled hair*, and are natives of the warmer parts of Europe.

A deſire to point out the connection between botany and polite literature, has occaſionally induced us to venture on hints and remarks of this kind, which the learned reader will, we hope, look on with an indulgent eye, and remember that our attempts, ſuch as they are, add little to the bulk, and nothing to the expence, of the work.

Juncus campestris

Sansom Sculp

JUNCUS CAMPESTRIS. HAIRY FIELD RUSH.

JUNCUS *Linnæi Gen. Pl.* HEXANDRIA MONOGYNIA.

Cal. 6-phyllus. *Cor.* o. *Capſula* 1-locularis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

JUNCUS *campeſtris* foliis planis ſubpiloſis, ſpicis ſeſſilibus pedunculatiſque. *Lin. Syſt. Vegetab. p.* 280. *Sp. Pl. p.* 468.

JUNCUS planifolius; ſpicis petiolatis, nutantibus; petalis ariſtatis. *Haller. hiſt.*

JUNCUS *campeſtris. Scopoli Fl. Carniol. p.* 258.

GRAMEN hirſutum capitulis Pſyllii. *Bauhin. Pin.* 7.

GRAMEN exile hirſutum. *Gerard. emac.* 17.

GRAMEN nemoroſum hirſutum minus anguſtifolium. *Parkinſon.* 1185.

Raii Syn. p. 416, Small Hairy Wood-Graſs.

Hudſon. Fl. Angl. 132, *ed.* 2. *p.* 152.

Lightfoot Fl. Scot. 186.

RADIX perennis, craſſitie pennæ coracis, ſublignoſa, fibris plurimis nigricantibus inſtructa, repens.

CULMUS ſimplex, palmaris, aut dodrantalis, erectus, folioſus, baſi tumidus, teres, lævis, enodis.

FOLIA plana, piloſa, pilis e margine foliorum erumpentibus, acuta, apicibus ſæpe rufis, membrana deſtituta, foliola duo erecta inæqualia ſpiculis ſubjecta culmum terminant.

SPICULÆ plerumque tres, ſubovatæ, *fig.* 1. floreſcente plantâ erecta, pedicellis inæqualibus inſidentes, inferiore ſubſeſſili.

PEDUNCULI filiformes, e vaginâ ciliatâ prodeuntes.

FLORES decem aut duodecem circiter in ſingula ſpicula, ſeſſiles.

CALYX: ſquamulæ plerumque quatuor, ovato-acutæ, membranaceæ, inæquales, foliolis calycinis multo breviores, ſingulum floſculum ambiunt, *fig.* 2.

CALYX proprius, hexaphyllus: foliolis lanceolato-acuminatis, patentibus, perſiſtentibus, nitidis, carinatis, e fuſco-purpureis, *fig.* 3.

COROLLA nulla.

STAMINA: FILAMENTA ſex, ſubulata, breviſſima: ANTHERÆ oblongæ, calycem æquantes, flavæ, quadriſulcatæ, bicuſpidatæ, *fig.* 4, 5, demiſſo polline tortuoſæ.

PISTILLUM: GERMEN viride, triquetrum, acuminatum: STYLUS brevis, filiformis: STIGMATA tria, longa, filiformia, flexuoſa, villoſa, *fig.* 6.

PERICARPIUM: CAPSULA tecta, triquetra, unilocularis, trivalvis, *fig.* 7, 8, 9.

SEMINA plerumque tria, ſubrotunda, olivacea, *fig.* 10, 11.

ROOT perennial, the ſize of a crow quill, ſomewhat woody, furniſhed with numerous blackiſh fibres, creeping.

STALK ſimple, from three to nine inches high, upright, leafy, ſomewhat enlarged at bottom, round, ſmooth, and without joints.

LEAVES flat, hairy, the hairs proceeding from the edges of the leaves, pointed, the tips often of a reddiſh brown colour, not furniſhed with any membrane: two ſmall, upright, unequal leaves, placed under the ſpiculæ, terminate the ſtalk.

SPICULÆ, generally three, ſomewhat oval, *fig.* 1, upright when the plant is in flower, ſitting on uneven foot-ſtalks, the lowermoſt ſpicula nearly ſeſſile.

FLOWER-STALKS thread-ſhaped, proceeding from a ſmall ſheath edged with hairs.

FLOWERS about ten or twelve in each ſpicula, ſeſſile.

CALYX: moſt commonly four ſmall ſcales, of an oval pointed ſhape, membranous and uneven, and much ſhorter than the leaves of the true Calyx, ſurround the baſe of each floret, *fig.* 2.

CALYX: the proper Calyx is compoſed of ſix leaves, ſpear-ſhaped, with a long point, ſpreading, permanent, ſhining, keeled, of a browniſh purple colour, *fig.* 3.

COROLLA wanting.

STAMINA: ſix FILAMENTS, tapering, and very ſhort: ANTHERÆ oblong, the length of the Calyx, yellow, with four grooves, terminating in two points, *fig.* 4, 5; on ſhedding the Pollen becoming twiſted.

PISTILLUM: GERMEN green, three-cornered, pointed: STYLE ſhort, thread-ſhaped: STIGMATA three, long, thread-ſhaped, crooked, and villous, *fig.* 6.

SEED-VESSEL: a CAPSULE covered by the Calyx, three-cornered, of one cavity and three valves, *fig.* 7, 8, 9.

SEEDS uſually three, of a roundiſh ſhape, and olive colour, *fig.* 10, 11.

THE above deſcription is taken from the *Juncus campeſtris* when growing in its moſt uſual ſtate in dry paſtures; in ſuch ſituations it has ſeldom more than three or four ſpiculæ; in moiſter and richer ſoils, particularly on boggy ground, it will often have a much greater number: but though it varies in ſize and the number of its parts, it ſtill continues very diſtinct from the *piloſus*, or *Hairy Wood Ruſh.*

It flowers in April and May, and ripens its ſeeds in June.

The hairs of this, and ſome of the other Junci, are of a very ſingular kind; a ſtranger to plants, would ſuppoſe that ſome animal had been robbed of its hair by rubbing on it.

The appearance of this plant indicates a dry, and conſequently not very luxuriant paſturage.

Rumex crispus

Sansom Sculp

RUMEX CRISPUS. CURLED DOCK.

RUMEX *Linnæi Gen. Pl.* HEXANDRIA TRIGYNIA.

Cal. 3-phyllus. *Petala* 3-conniventia. *Sem.* 1, triquetrum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

RUMEX *crispus* floribus hermaphroditis: valvulis integris graniferis, foliis lanceolatis undulatis acutis.

Linn. Syst. Vegetab. p. 284. *Spec. Plant. p.* 478. *Fl. Suecic. p.* 117.

LAPATHUM foliis crispis, imis ovatis, supremis lanceolatis, calycibus verrucosis. *Haller hist. n.* 1589.

LAPATHUM *crispum. Scopoli Fl. Carniol. p.* 261.

LAPATHUM folio acuto crispo. *Bauhin. Pin.* 115.

LAPATHUM acuti varietas folio crispo. *Ger. emac.* 387.

LAPATHUM acutum minus. *Parkinson.* 226.

Raii Syn. p 141. Sharp-pointed Dock with curled leaves.

Hudson Fl. Angl. p. 134.

Lightfoot Fl. Scot. 108.

RADIX perennis, flavescens, fusiformis, per ætatem superne ramosus evadit.

CAULIS bipedalis aut tripedalis, erectus, striatus, lævis, ramosus.

FOLIA lanceolata, undulata, acuta, subtus venosa, petiolis sulcatis.

FLORES in spicas densissime glomerati, caulem penitus fere occultantes.

CALYX: PERIANTHIUM triphyllum, foliolis cymbiformibus, corollâ brevioribus, *fig.* 1.

COROLLA: PETALA tria, ovata, concava, demum conniventia, magna, granifera, venosa, reticulata, integra, SEMEN unicum, triquetrum, nitidum, pallide fuscum foventia, *fig.* 3, 7, 8, 9.

STAMINA: FILAMENTA tria, capillaria, brevia: ANTHERÆ flavæ, *fig.* 3.

PISTILLUM: GERMEN triquetrum: STYLI tres, reflexi: STIGMATA laciniata, *fig.* 4, 5, 6.

ROOT perennial, tapering, of a yellowish colour, becoming branched at top as it grows old.

STALK two or three feet high, upright, finely grooved, smooth, and branched.

LEAVES lanceolate, waved, pointed, underneath veiny, the foot-stalks grooved.

FLOWERS crouded very thickly together in spikes, and almost entirely hiding the stalk.

CALYX: a PERIANTHIUM of three leaves, which are boat-shaped, and shorter than the Corolla, *fig.* 1.

COROLLA: three oval, hollow PETALS, finally becoming closed, and large; each bearing a grain, veiny, reticulated, entire at the edges, including a three-cornered, shining, pale brown SEED, 3, 7, 8, 9.

STAMINA: three very fine short FILAMENTS: ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN three-corner'd: STYLES three, turning back: STIGMATA jagged, *fig.* 4, 5, 6.

THE *Docks*, like the several species of *Goosefoot* and *Orach*, are with difficulty distinguished from each other.

The species here figured, is one of the most common, as well as the most injurious as a weed. It is found in almost every kind of soil and situation; as in wet meadows, by the sides of roads, and in cultivated ground, into which it is generally introduced with dung. I have remarked some Clover fields in which this plant formed nearly one half of the crop.

It may be distinguished from the other *Docks* by its *yellow root*, *waved leaves*, and large and numerous seed-coverings, which grow so thick as almost to hide the stalk, and which are larger than in most of the other *Docks*, of a roundish shape, with prominent veins, and an entire or slightly waved edge.

It flowers in June, July, and August.

EPILOBIUM HIRSUTUM. LARGE-FLOWER'D WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *hirſutum* foliis ovato-lanceolatis, ſemiamplexicaulibus, hirſutis; caule ramoſiſſimo; radice repente.

EPILOBIUM *hirſutum* foliis oppoſitis lanceolatis ſerratis decurrenti amplexicaulibus. *Lin. Syſt. Vegetab. p.* 471. *Spec. Plant. p.* 494. *Flor. Suecic. p.* 123.

EPILOBIUM foliis ſemiamplexicaulibus, lanceolatis, hirſutis. *Haller. hiſt. helv. p.* 125.

CHAMÆNERION *hirſutum. Scopoli Fl. Carniol.* 270.

LYSIMACHIA ſiliquoſa hirſuta magno flore. *Bauhin. pin.* 245.

LYSIMACHIA ſiliquoſa. *Ger. emac.* 476.

Raii Syn. p. 311. Great hairy codded Looſeſtrife or Willow-herb, called alſo Codlings and Cream.

Hudſon. Fl. Angl. p. 141. 3. *ed.* 2. *p.* 162. 3.

Lightfoot. Fl. Scot. p. 197.

Oeder. Fl. Dan. ic. 326.

RADIX perennis, furculoſa, fibris capillata, e cujus capite erumpunt germina majuſcula, rubentia, in ſummâ tellure reptantia, quibus ſe late diffundit et propagat.

CAULIS tripedalis ad orgyalem, erectus, ramoſiſſimus, teres, ad baſin ſubtetragonus, hirſutus, purpuraſcens; RAMI cauli ſimiles, adſcendentes.

FOLIA ovato-lanceolata, argute denticulata, hirſuta, ſemiamplexicaulia, venoſa, ramorum ſubtortuoſa.

FLORES magni, ſpecioſi, purpurei, ſubcampanulati, paululum nutantes.

CALYX: PERIANTHIUM ſuperum, erectum, quadripartitum, baſi anguloſum, laciniis ovato-acutis, fundo villoſo, *fig.* 1.

COROLLA: PETALA quatuor, obcordata, emarginata, purpurea, baſi albida, calyce duplo longiora, *fig.* 2.

STAMINA: FILAMENTA octo, quorum quatuor longiora, alba, ſubulata: ANTHERÆ oblongæ, biloculares, flaveſcentes, *fig.* 3.

PISTILLUM: GERMEN oblongum, villoſum, inferum, tetragono-ſulcatum, glandulis minimis coronatum: STYLUS filiformis, declinatus, Staminibus longior: STIGMA craſſum, quadrifidum, laciniis revolutis, villoſis, *fig.* 4, 5, 6.

PERICARPIUM: CAPSULA triuncialis, obtuſe tetragona, ſulcata, ut in germine glandulis terminata, leniter hirſuta, quadrilocularis, quadrivalvis.

SEMINA ovata, pallide fuſca, plurima, pappoſa, lente viſa hinc convexa, ſcabriuſcula, illinc compreſſo-ſulcata, RECEPTACULO tetragono, libero, flexili ſeriatim affixa, *fig.* 7.

ROOT perennial, full of ſhoots, with numerous fibres, ſending off from the upper part ſtoles of a conſiderable thickneſs, which creeping under the ſurface of the ground, ſpread widely and propagate the plant.

STALK from three to ſix feet high, upright, very much branched, round, ſomewhat quadrangular at bottom, hirſute, and purpliſh: BRANCHES like the ſtalk, nearly upright.

LEAVES betwixt oval and lanceolate, finely toothed at the edges, hirſute, half embracing the ſtalk, veiny, thoſe on the branches a little twiſted.

FLOWERS large, ſhowy, of a purple colour, ſomewhat bell-ſhaped, and hanging down a little.

CALYX: a PERIANTHIUM placed above the Germen, upright, angular at the baſe, deeply divided into four ſegments, which are oval and pointed, the bottom in the inſide villous, *fig.* 1.

COROLLA: four PETALS inverſely heart-ſhaped, emarginated, of a purple colour with a white baſe, and twice the length of the Calyx, *fig.* 2.

STAMINA: eight FILAMENTS, four of which are ſhorter than the others, white and tapering: ANTHERÆ oblong, bilocular, and yelloviſh, *fig.* 3.

PISTILLUM: GERMEN oblong, villous, placed below the Calyx, four-corner'd and grooved, crowned with very minute glands: STYLE filiform, hanging down, and longer than the Stamina: STIGMA thick, divided into four ſegments, which are villous and roll'd back, *fig.* 4, 5, 6.

SEED-VESSEL, a CAPSULE about three inches long, obtuſely four cornered, and grooved, terminated as in the Germen with glands, ſlightly hirſute, having four cavities and four valves.

SEEDS oval, pale brown, numerous, downy, viewed with a magnifier on one ſide convex, and roughiſh, on the other, flattiſh and grooved, affixed in rows to a four-cornered, looſe, flexible RECEPTACLE, *fig.* 7.

THE *Lyſimachia ſiliquoſa hirſuta magno flore*, and the *Lyſimachia hirſuta parvo flore* of BAUHINE, are conſidered by LINNÆUS as the ſame ſpecies.

Mr. RAY, both in his *Hiſtoria Plantarum* and *Synopſis*, conſiders them as diſtinct ſpecies; and Mr. HUDSON, viewing them in the ſame light, gives a new name to the larger flowering one, calling it *ramoſum*, and retains the name of *hirſutum* for the ſmaller flowering one: but as the larger flowering plant is the ſpecies which LINNÆUS has diſtinguiſhed by the name of *hirſutum*, there appears more propriety in adopting his name for the ſpecies, and giving a new name to what he conſiders as the variety.

The ſpecies here figured, grows very commonly in and by the ſides of wet ditches, ponds, &c. riſing generally to the height of five feet.

It flowers in July and Auguſt.

A variety with a white flower ſometimes occurs; and a ſort with variegated leaves, is ſold by the gardeners.

Having a creeping root, it is very apt to increaſe too much if not properly attended to. The leaves, when young, have a ſhining appearance; and if bruiſed, ſend forth an agreeable ſmell, whence its name of *Codlings and Cream*.

Is it not a plant deſerving the notice of the Farmer? If cattle are found to eat it, either green or dryed, may it not be cultivated to advantage it wet ſituations, where other uſeful plants will not grow?

N° 117

Epilobium hirsutum

Sansom Sculp

Epilobium villosum

EPILOBIUM VILLOSUM. HOARY WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 21. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *villoſum* foliis oblongo-lanceolatis, dentatis, pubeſcentibus, caule tereti villoſo.

EPILOBIUM *hirſutum* foliis lanceolatis ſerratis ſubdecurrentibus; inferioribus oppoſitis, caule ſubſimplici. *Hudſon Fl. Angl. ed.* 2. *p.* 162.

LYSIMACHIA ſiliquoſa hirſuta parvo flore. *C. Bauhin. pin.* 245. *Prod.* 116.

LYSIMACHIA ſiliquoſa hirſuta flore minore. *I. B. II.* 906.

LYSIMACHIA ſiliquoſa ſylveſtris hirſuta. *Parkinſon?* *Raii Hiſt. Pl. p.* 861. *Syn. ed.* 3. *p* 311.

The leſſer hairy codded Looſeſtrife or Willow-herb, with ſmall flowers.

Lightfoot. Fl. Scot. p. 198. var. hirſut.

RADIX perennis, fibroſa.

CAULIS pedalis ad tripedalem, ſimplex, aut ramoſus pro loco natali, teres, *villoſus*.

FOLIA oblongo-lanceolata, connata, non vero decurrentia, rare dentata, dentibus glanduloſis, mollia, pubeſcentia, ſubtus albida, patentia, in locis ſiccioribus ſæpe erecta.

FLORES parvi, purpurei.

CALYX: PERIANTHIUM tetraphyllum, ſuperum, foliolis ovato-lanceolatis, hirſutulis, *fig.* 1.

COROLLA: PETALA quatuor, obcordata, calyce duplo fere longiora, *fig.* 2.

STAMINA: FILAMENTA octo; ſubulata, alterna breviora: ANTHERÆ ovales, compreſſæ, obtuſæ, *fig.* 3.

PISTILLUM: GERMEN cylindraceum, longiſſimum: STYLUS filiformis: STIGMA craſſum, quadrifidum, laciniis vix vero revolutis, *fig.* 4.

PERICARPIUM: CAPSULA prælonga, rubeſcens.

SEMINA plurima, pappo coronata.

ROOT perennial and fibrous.

STALK from one to three feet high, ſimple or branched according to its place of growth, round, *hoary*, and purpliſh.

LEAVES oblong and lanceolate, uniting at bottom around the ſtalk, but not running down it, teeth at the edge few and glandular, ſoft, downy, underneath whitiſh, ſpreading, but in more dry ſituations frequently upright.

FLOWERS ſmall and purple.

CALYX: a PERIANTHIUM of four leaves, placed above the Germen, oval, pointed, and ſlightly hirſute, *fig.* 1.

COROLLA: four PETALS inverſely heart-ſhaped, almoſt twice the length of the Calyx, *fig.* 2.

STAMINA: eight FILAMENTS, tapering, the four alternate ones ſhorteſt: ANTHERÆ oval, flattened, and obtuſe, *fig.* 3.

PISTILLUM: GERMEN cylindrical, very long: STYLE filiform: STIGMA thick, divided into four ſegments, which are ſcarcely rolled back, *fig.* 4.

SEED-VESSEL, a long CAPSULE, of a reddiſh colour.

SEEDS numerous, covered with a pappus or down.

IN three reſpects does this plant particularly, and invariably, differ from the *hirſutum*; of which, as hath before been obſerved, it is conſidered by LINNÆUS and other writers, as a variety only; viz. in its *bloſſoms*, *root*, and *pubeſcence*; either of which would appear alone ſufficient to conſtitute it a diſtinct ſpecies.

The bloſſoms in the firſt place, are not in general more than one third as large; the root does not creep; and the ſtalk and leaves, are covered with numerous ſoft hairs, which give the whole plant a whitiſh or hoary appearance, that is particularly ſtriking.

Beſides theſe characters, the plant is alſo much ſmaller; and in general, is not ſo much branched. I have often gathered ſpecimens of it not more than a foot in height, with a ſimple ſtalk; and have alſo frequently found it much higher, as well as much branched, when there was no reaſon to ſuppoſe the plant had received any injury, which Mr. HUDSON aſſerts is always the caſe, when the plant occurs in the latter ſtate. The Calyx and Stigma, differ alſo very materially in the two plants.

It is very common with us on the banks of rivulets, and in watery places; and flowers in July and Auguſt.

No particular qualities are aſcribed to it.

Epilobium tetragonum

Epilobium tetragonum. Square-Stalk'd Willow-Herb.

EPILOBIUM *Linnæi. Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *tetragonum* foliis lanceolatis denticulatis; caule tetragono; ſtigmate integerrimo.

EPILOBIUM foliis lanceolatis denticulatis; imis oppoſitis, caule tetragono. *Lin. Syſt. Vegetab. p.* 297. *Sp. Plant.* 495.

EPILOBIUM foliis lanceolatis, glabris, dentatis. *Haller. hiſt. p.* 426. *n.* 997.

CHAMÆNERION *tetragonum. Scopoli. Flor. Carniol. p.* 271. 454.

LYSIMACHIA ſiliquoſa glabra media ſive minor. *Gerard. emac.* 479.

LYSIMACHIA ſiliquoſa glabra minor. *Bauhin. Pin.* 245. *Raii. Syn. p.* 311. 5, Middle ſmooth-leaved codded Willow-herb, or Looſeſtrife.

Hudſon Fl. Angl. ed. 1. *p.* 141. *ed.* 2. *p.* 162.

Lightfoot. Fl. Scot. p. 198.

RADIX perennis, fibroſa, fibris albidis, ſtolonibus quotannis reparata, non vero repens.

CAULIS erectus, ſuperne valde ramoſus, bipedalis, rigidus, inferne purpuraſcens, ſubtetragonus, lævis.

FOLIA ſubdecurrentia, unde caulis anguloſus, inferiora lanceolata, ſuperiora lineari-lanceolata, ſerrata, venoſa, glabra.

FLORES parvi, purpurei.

CALYX: PERIANTHIUM quadripartitum, foliis lanceolato-acuminatis, pubeſcentibus, carinatis, apicibus rufis, *fig.* 1.

COROLLA: PETALA quatuor, purpurea, venis ſaturatioribus ſæpe ſtriata, calyce paulo longiora, emarginata, *fig.* 2.

STAMINA: FILAMENTA octo, quorum quatuor breviora: ANTHERÆ flaveſcentes, *fig.* 3.

PISTILLUM: GERMEN tetragonum, pubeſcens: STYLUS brevis, albus: STIGMA craſſum, album, *integerrimum*, *fig.* 4.

PERICARPIUM: CAPSULA longiſſima, fere triuncialis, pedunculis triplo brevioribus inſidens.

SEMINA plurima, pappoſa.

ROOT perennial, fibrous, the fibres whitiſh, repaired yearly by new ſhoots, but not creeping.

STALK upright, at top much branched, about two feet high, ſtiff, at bottom purpliſh, ſmooth, and ſomewhat ſquare.

LEAVES ſomewhat decurrent, whence the angular appearance of the ſtalk; the lower ones lanceolate; the upper ones narrower, ſerrated, veiny, and ſmooth.

FLOWERS ſmall and purple.

CALYX: a PERIANTHIUM divided into four ſegments, which are narrow and tapering to a point, downy, the midrib projecting on the under ſide, the tips reddiſh, *fig.* 1.

COROLLA: four PETALS, purple, often ſtreaked with veins of a deeper colour, ſomewhat longer than the calyx, with a notch at top, *fig.* 2.

STAMINA: eight FILAMENTS, four long and four ſhort: ANTHERÆ yellowiſh, *fig.* 3.

PISTILLUM: GERMEN ſquare, downy: STYLE ſhort and white: STIGMA thick, white, and *perfectly entire*, *fig.* 4.

SEED-VESSEL a very long CAPSULE, approaching to three inches, ſitting on a flower-ſtalk thrice as ſhort.

SEEDS numerous and downy.

THE preſent ſpecies of *Epilobium*, takes its name of *tetragonum* from the apparent ſquareneſs of its ſtalk, which however is not ſo completely ſquare as that of the *Hypericum quadrangulum*, but aſſumes rather an angular appearance, ariſing as in many other plants, from projecting lines running from the leaves down the ſtalk: this however is one of the moſt ſtriking characters of this ſpecies: to which may be added the narrowneſs of its leaves, the uncommon length of its pods, and its undivided ſtigma.* Theſe are the peculiarities by which this plant may readily be diſtinguiſhed: but too much ſtreſs muſt not be laid on ſome of them.

The breadth of a leaf, its being placed on a peduncle, or ſitting cloſe to the ſtalk, are in general conſidered as excellent ſpecific characters; but in this plant, as well as ſome others, we have a proof of their fallibility; the leaves being ſometimes nearly as broad as thoſe of the *montanum*, and placed on foot-ſtalks of a conſiderable length. When I firſt accidently met with this variety, I was led to conclude it to be a diſtinct ſpecies; but a careful attention to it, afterwards convinced me it was only a variety.

The *Epilobium tetragonum* is no uncommon plant with us; but is generally to be met with in watery ditches, by the ſides of roads; and where it does occur, it uſually abounds. Among a variety of other places, I have obſerved it in the Lane leading from *Newington* to *Hornſey Wood*.

It flowers with the other *Willow-herbs*.

The farmer has no reaſon to complain of it: nor is it celebrated in the annals of phyſic.

*This character ſeems firſt to have been noticed by RAY: his words are *Stylus non ut in præcedente quadrifidus eſt*, Hiſt. Pl. p. 861.

EPILOBIUM ANGUSTIFOLIUM. ROSEBAY WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *anguſtifolium* foliis ſparſis lineari-lanceolatis, floribus inæqualibus. *Linnæi Syſt. Vegetab. p.* 296. *Sp. Pl.* 347.

EPILOBIUM flore difformi, foliis lanceolatis, tranſverſim nervoſis. *Haller hiſt. n.* 427.

CHAMÆNERION *anguſtifolium. Scopoli Fl. Carn.*

LYSIMACHIA ſpecioſa, quibuſdam onagra dicta ſiliquoſa. *Bauhin hiſt. II.* 906.

LYSIMACHIA Chamænerion dicta anguſtifolia. *Bauhin. pin.* 245. *Raii Synop.* 310. Roſebay Willow-herb. *Hudſon Flor. Angl. p.* 140. *Lightfoot Flor. Scot. p.* 197. *Oeder Dan. ic.* 289.

RADIX perennis, repens.

CAULIS erectus, tripedalis, ad orgyalem, ramoſiſſimus, teres, pubeſcens, ramis alterne oppoſitis.

FOLIA lanceolata, alterna, ſubdecurrentia, glabra, margine minute remoteque dentatâ, nervo medio albido.

BRACTEÆ foliis ſimiles.

FLORES purpurei, ſpecioſi, ſubſpicati, raro ultra quatuor aut quinque unà in eâdem ſpicâ florentes.

CALYX: PERIANTHIUM tetraphyllum, ſuperum, foliolis lanceolatis, coloratis, ſurſum curvatis, *fig.* 1.

COROLLA: PETALA quatuor, purpurea, patentia, ſubrotunda, emarginata, unguibus anguſtis, *fig.* 2, duobus inferioribus remotioribus.

STAMINA: FILAMENTA octo, ſubæqualia, purpuraſcentia, primum deflexa, demum ſuberecta, Piſtillo breviora: ANTHERÆ rubræ, biloculares: POLLEN viride, *fig.* 3, 4.

PISTILLUM: GERMEN inferum, oblongum, longitudine Styli, ſubtetragonum, glandula coronatum: STYLUS filiformis, albus, prope baſin villoſus: STIGMA quadrifidum, magnum, laciniis villoſis revolutis, *fig.* 5, 6, 7.

PERICARIUM: CAPSULA cylindracea, incurvata, quadrilocularis, quadrivalvis.

SEMINA numeroſa, ſtriata, pappo coronata Receptaculo longiſſimo tetragono, libero, flexili affixa, *fig.* 8, 9.

ROOT perennial and creeping.

STALK upright, from three to ſix feet high, very much branched, round, and pubeſcent; the branches alternately oppoſite.

LEAVES lanceolate, alternate, running ſlightly down the ſtalk, ſmooth, the edge minutely and rarely indented, the midrib whitiſh.

FLORAL-LEAVES like thoſe on the ſtalk.

FLOWERS purple, ſhowy, growing in a kind of ſpike, ſeldom more than four or five flowering together on the ſame ſpike.

CALYX: PERIANTHIUM of four leaves, placed above the Calyx; the leaves lanceolate, coloured, and bending upwards.

COROLLA: four roundiſh PETALS of a purple colour, ſpreading, the claws narrow, *fig.* 2; the two lowermoſt ſomewhat remote from each other.

STAMINA: eight FILAMENTS, nearly of an equal length, of a purpliſh colour, at firſt bending down, finally becoming ſomewhat upright, ſhorter than the Piſtillum: ANTHERÆ red, having two cavities: the POLLEN green, *fig.* 3, 4.

PISTILLUM: GERMEN below the Calyx, oblong, the length of the Style, ſlightly quadrangular, crowned by a gland: STYLE filiform, white, villous towards the bottom: STIGMA large, divided into four ſegments, which are villous, and turn back, *fig.* 5, 6, 7.

SEED-VESSEL: a CAPSULE of a cylindrical form, ſomewhat incurvated, of four cavities and four valves.

SEEDS numerous, ſtriated, crowned with a down, and affixed to a very long, looſe, flexible Receptacle, *fig.* 8, 9.

IN the third edition of RAY's *Synopſis*, this plant is ſaid to have been found growing wild near *Alton*, in *Hampſhire:* in confirmation of this, I have myſelf found it growing in a wild unfrequented wood near the ſame place.

The ſhowy appearance of its bloſſoms, has long ſince introduced it into our gardens; where, by means of its creeping roots, it is apt to increaſe more than is deſirable: and from the refuſe of gardens, we ſuſpect thoſe plants, which we have here and there noticed about town, have ariſen. Mr. HUDSON, in his *Flora Anglica*, mentions its growing on *Maize Hill*, beyond *Greenwich.*

It continues in bloſſom through July, Auguſt, and September.

HALLER, from ſeveral authors, mentions, that the young ſhoots are eatable, although an infuſion of the plant ſtupifies; that the pith alſo is eatable; which when dried, is boiled, whence it becomes ſweet, and by a proper proceſs, affords good beer; as alſo vinegar: that it is alſo added to the Cow Parſnep, to enrich the ſpirit which is prepared from that plant: that it likewiſe affords good fodder for cattle; and the down of the ſeeds, mixed with beavers hair, has been manufactured into ſeveral articles of cloathing.

It is too diſtinct to be miſtaken for any of the other ſpecies; and is ſometimes found with white flowers.

Epilobium angustifolium

Sansom Sculp

ERICA CINEREA. FINE LEAVED HEATH.

ERICA *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-phyllus. *Cor.* 4-fida. *Filamenta* receptaculo inſerta. *Antheræ* bifidæ.

Caps. 4-locularis.

Raii Syn. ARBORES ET FRUTICES.

ERICA *cinerea* foliis ternis glabris linearibus.

ERICA *cinerea* Antheris criſtatis, Corollis ovatis, Stylo ſubexerto, foliis ternis, Stigmate capitato. *Linnæi Syſt. Vegetab. p.* 303.

ERICA humilis, cortice cinereo Arbuti flore. *Bauhin p.* 486.

ERICA virgata ſive *VI* Cluſii. *Parkinſon* 1483.

ERICA tenuifolia *Gerard emac.* 1380. *Raii Syn. p.* 471, Fine leaved Heath. *Hudſon Fl. Angl. p.* 144. *Oeder Dan. icon.* 38.

RADIX perennis, lignoſa.

CAULES ſuffruticoſi, pedales, lignoſi, cortice cinereo, ramoſi, ramis oppoſitis.

FOLIA terna, linearia, patentia, ſupra glabra, nitida, tranſverſim rugoſa, infra canaliculata, ſaturate viridia, *fig.* 1, 2.

FLORES ſaturate purpurei, tactu ſonori, ſpicati, ſpicis longis, verticillato-glomerati, terminalibus.

CALYX PERIANTHIUM tetraphyllum, foliolis lanceolatis, acuminatis, margine membranaceis, coloratis, perſiſtentibus, foliolis duobus acutis et multo minoribus ad baſin, *fig.* 3, 5.

COROLLA monopetala, ovata, ore quadrifido, laciniis obtuſis, ſæpe emortuis, perſiſtens, *fig.* 4.

STAMINA: FILAMENTA octo, ſubulata, alba, Corollâ breviora, receptaculo inſerta; ANTHERÆ ſubſagittatæ cohærentes, biloculares, bicornes, cornibus laciniatis, ad baſin rubris, biforaminoſæ, *fig.* 6, 7.

PISTILLUM: GERMEN cylindraceum, ſulcatum; STYLUS ſubulatus, purpureus, Corollâ incluſus, Staminibus longior; STIGMA ſubrotundum *fig.* 8, 9, 10.

PERICARPIUM CAPSULA ſubrotunda, quadrilocularis, quadrivalvis.

SEMINA plura, ſubovata, ſuperficie reticulata, Tetralicis quadruplo majora.

⁂ ROOT perennial and woody.

STALKS ſhrubby, about a foot high, woody; the bark of an aſh colour, branched; the branches oppoſite.

LEAVES growing three together, linear, ſpreading, above ſmooth and ſhining, tranverſly wrinkled; below hollow, of deep green colour, *fig.* 1, 2.

FLOWERS of a deep purple colour, ſonorous when touched, growing in long, cluſtered, whirled ſpikes, which are terminal.

CALYX: a PERIANTHIUM of four leaves, of a pointed oval ſhape, membranous at the edge, coloured, continuing, with two pointed and much ſmaller leaves at the bottom of them, *fig.* 3, 5.

COROLLA of one Petal, oval, the mouth divided into four ſegments, which often occur withered, continuing, *fig.* 4.

STAMINA: eight FILAMENTS, tapering, white, ſhorter than the Corolla, inſerted into the Receptacle: ANTHERÆ ſomewhat arrow ſhaped, adhering together, with two cavities open at top, and two little horns which are jagged and red at bottom, *fig.* 6, 7.

PISTILLUM: GERMEN cylindrical, grooved: STYLE tapering, purple, incloſed within the Corolla, but longer than the Stamina: STIGMA roundiſh, *fig.* 8, 9, 10.

SEED-VESSEL a roundiſh Capſule of four cavities and four valves.

SEEDS ſeveral, of an oval ſhape, the ſurface reticulated, four times larger than thoſe of the croſs leaved Heath.

THIS ſpecies of *Heath*, which produceth the moſt ſhowy flowers, grows generally with the *croſs-leaved* and *common Heath*; and flowers in July and Auguſt.

As it grows to a pretty conſiderable height, it is applicable to the ſame uſes as the *common Heath.*

It is diſtinguiſhed from the *croſs-leaved Heath*, by the fineneſs, ſmoothneſs and deep green colour of its leaves: its flowers alſo grow more in ſpikes, and are of a deeper purple colour.

Erica cinerea.

ADOXA MOSCHATELLINA. TUBEROUS MOSCHATEL.

ADOXA *Linnæi Gen. Pl.* OCTANDRIA TETRAGYNIA.

Cal. 2-fidus, inferus. *Cor.* 4-f. 5-fida, ſupera. *Bacca* 4-f. 5-locularis, calyce coalita.

Raii Syn. Gen. 16. HERBÆ BACCIFERÆ.

ADOXA *Moſchatellina. Linnæi Syſt. Vegetab. p.* 315. *Sp. Pl.* 527. *Fl. Suecic. p.* 132.

MOSCHATELLINA *Haller hiſt.* 429.

MOSCHATELLA *Adoxa. Scopoli. Fl. Carniol. p.* 281.

MOSCHATELLINA foliis fumariæ bulboſæ. *I. B.* 111. 206.

RANUNCULUS nemoroſus Moſchatella dictus. *Parkinſon* 226.

RANUNCULUS nemorum Moſchatellina dictus. *Bauhin. Pin.* 178.

RADIX CAVA minima viridi flore. *Gerard emac.* 1091. *Raii Syn. p.* 268, Tuberous Moſchatel. *Hudſon Fl. Angl. ed.* 2. *p.* 172. *Lightfoot Fl. Scot. p.* 209. *Oeder Fl. Dan. ic.* 139.

RADIX perennis, repens, dentata, alba.

ROOT perennial, creeping, toothed, and of a white colour.

FOLIA *radicalia* tria aut quatuor, tri-ternata, inciſa, glabra, lobis ovatis, mucronatis, *caulina* duo brevius petiolata, oppoſita.

LEAVES: *radical* leaves commonly three or four, triply ternate, deeply cut in, ſmooth, and ſhining; the ſegments or lobes oval, with a ſhort point: thoſe of the ſtalk two in number, ſtanding on ſhorter foot-ſtalks, and oppoſite.

CAULIS folia ſuperans, ſimplex, ſubtetragonus.

STALK ſomewhat taller than the leaves, ſimple, and nearly ſquare.

PEDUNCULUS quadrangularis, nudus, terminalis.

FLOWER-STALK ſquare, naked, and terminating the ſtalk.

CAPITULUM tetragonum, ex quatuor floribus verticillatis, quinto terminali.

HEAD ſquare, from the union of four of the flowers, and terminated by the fifth.

CALYX: PERIANTHIUM inferum, ſæpius triangulare, planum, perſiſtens, *fig.* 1.

CALYX: a PERIANTHIUM placed beneath the germen, moſt commonly triangular, flat, and permanent, *fig.* 1.

COROLLA monopetala, rotata, plana, quadrifida, aut quinquefida, laciniis ovatis, acutis, calyce longioribus, *fig.* 2, 3, 4.

COROLLA monopetalous, wheel-ſhaped, flat, divided into four or five ſegments, which are oval, pointed, and longer than the calyx, *fig.* 2, 3, 4.

STAMINA: FILAMENTA octo aut decem, ſubulata, longitudine calycis: ANTHERÆ flavæ, planæ, orbiculatæ, *fig.* 5.

STAMINA: eight or ten FILAMENTS, tapering, the length of the calyx: ANTHERÆ yellow, flat, and round, *fig.* 5.

PISTILLUM: GERMEN ſubrotundum, calyce cinctum: STYLI plerumque quatuor, ſimplices, erecti, longitudine ſtaminum, perſiſtentes: STIGMATA ſimplicia, *fig.* 6.

PISTILLUM: GERMEN roundiſh, ſurrounded by the calyx: STYLES generally four, ſimple, upright, the length of the ſtamina, permanent: STIGMATA ſimple, *fig.* 6.

PERICARPIUM: BACCA globoſa, viridis, quadrilocularis, cum calyce coalita, *fig.* 7.

SEED-VESSEL; a round BERRY of a green colour, having four cavities, and united to the calyx, *fig.* 7.

SEMINA ſolitaria, ovata, compreſſa, *fig.* 8.

SEEDS ſingle, oval, and flattened, *fig.* 8.

SOME of the antient botaniſts conſidered this ſingular plant as a *Fumaria*, others as a *Ranunculus*, from the appearance of its foliage; but an attention to its fructification, ſhews it to be a plant altogether *ſui generis.*

It is one of the bacciferous plants of RAY, but its berries are rarely produced, and not to be diſcovered without a nice examination.

It varies much in the diviſions of its Calyx, and Corolla, as well as in the number of its Stamina, even in the terminal flower.

In *Charlton Wood* we find it abundantly, flowering in April and May.

Adoxa
Moschatellina
Killian

Chrysosplenium oppositifolium

Sansom Sculp

Chryſoſplenium Oppoſitifolium. Common Golden Saxifrage.

CHRYSOSPLENIUM *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Cal. 4-ſ. 5-fidus, coloratus. *Cor.* 0. *Caps.* 2-roſtris, 1 locularis, polyſperma.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHRYSOSPLENIUM *oppoſitifolium* foliis oppoſitis. *Lin. Syſt. Vegetab. p.* 342. *Sp. Pl.* 569.

CHRYSOSPLENIUM foliis conjugatis. *Haller. Hiſt. No.* 1549.

SAXIFRAGA rotundifolia aurea. *Bauhin. pin. p.* 309.

SAXIFRAGA aurea. *Ger. emac.* 841. *Parkinſon* 425. *Raii Syn.* 158. Golden Saxifrage. *Hudſon Fl. Angl. p.* 156. *Oeder Fl. Dan. ic.* 365. *Lightfoot Fl. Scot. p.* 220.

RADICES perennes, fibroſæ, capillares.

CAULES baſi repentes, quadrati, tenerrimi, erecti, palmares et ultra, pilis raris hirſuti; ramoſi, ſuperne dichotomi.

FOLIA oppoſita, connata, petiolata, patentia, ſubrotunda, pilis raris albidis hirſuta, dentato-crenata, ſubcarnoſa, e flavo vireſcentia, ſubtus albida, ſuprema profundius crenata.

FLORES flavi, ſeſſiles, ſummis ramis inſidentes, corymboſi, faſtigiati.

CALYX: PERIANTHIUM quadripartitum, rarius quinquepartitum, patens, flavum, perſiſtens; laciniis ovatis, ſubæqualibus, *fig.* 1, 2.

COROLLA nulla.

STAMINA: FILAMENTO octo, (in ſupremo flore decem aliquando obſervantur,) ſubulata, erecta, longitudine fere calycis: ANTHERÆ didymæ, ſubrotundæ, flavæ, *fig.* 3, 4.

NECTARIUM ſquamula crenulata germen cingens, *fig.* 5.

PISTILLUM: GERMEN inferum, deſinens in STYLOS duos, ſubulatos, longitudine ſtaminum: STIGMATA obtuſa, *fig.* 6.

PERICARPIUM: CAPSULA biroſtris, bipartita, unilocularis, bivalvis, calyce viridi cincta.

SEMINA plurima, minuta, aurantiaca.

ROOTS fibrous, capillary, and perennial.

STALKS creeping at bottom, ſquare, very tender, upright, about four inches in height, beſet with a few ſtiffiſh hairs, branched, and forked at top.

LEAVES oppoſite, connate, ſtanding on foot-ſtalks, ſpreading, of a roundiſh figure, beſet with a few white ſtiffiſh hairs, indented or crenated at the edges, ſomewhat fleſhy, of a yellowiſh green colour, but whitiſh underneath; the uppermoſt leaves more deeply notched.

FLOWERS yellow, ſeſſile, ſitting on the tops of the branches, forming a corymbus perfectly flat at top.

CALYX: a PERIANTHIUM divided into four ſegments, ſeldom into five, ſpreading, of a yellow colour, and continuing; the ſegments ovate, and nearly equal, *fig.* 1, 2.

COROLLA wanting.

STAMINA: eight FILAMENTS, (in the top flower ten are ſometimes obſervable,) tapering, upright, almoſt the length of the calyx: ANTHERÆ double, roundiſh, and yellow, *fig.* 3, 4.

NECTARY a ſcale with a crenated edge, ſurrounding the germen, *fig.* 5.

PISTILLUM: GERMEN placed below the calyx, ending in two tapering STYLES, the length of the Stamina: STIGMATA blunt, *fig.* 6.

SEED-VESSEL; a CAPSULE having two beaks or horns, dividing in the middle, of one cavity, and two valves, ſurrounded by a green Calyx.

SEEDS numerous, minute, of an orange colour.

THE antient botaniſts ſhewed no ſmall botanic diſcernment in conſidering this plant as a *Saxifraga*; and although in ſtrict propriety it may be neceſſary to form a different genus of it, yet its affinity muſt be confeſſed to be very great.

The part which LINNÆUS calls the *Receptaculum angulatum*, appears to be more properly a kind of *Nectarium*; the Stamina proceed from beneath, not out of it.

As the terminal flower in this plant is rarely divided into more than four ſegments, and has only eight Stamina, it would perhaps be more proper to place it in the claſs OCTANDRIA.

It grows in great abundance in the boggy part of *Charlton Wood*; and flowers in April. The ſeeds ripen in May.

Authors are ſilent as to its uſeful or noxious qualities.

Saxifraga Tridactylites.

SAXIFRAGA TRIDACTYLITES. RUE-LEAVED SAXIFRAGE.

SAXIFRAGA *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Cal. 5-partitus. *Cor.* 5-petala. *Caps.* 2-roſtris, 1 locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAXIFRAGA *tridactylites* foliis caulinis cuneiformibus trifidis alternis, caule erecto ramoſo. *Linnæi Syſt. Vegetab. p.* 344. *Sp. Pl. p.* 578. *Fl. Suecic. p.* 143.

SAXIFRAGA foliis petiolatis trilobatis caule erecto ramoſo et folioſo. *Haller. hiſt. helv. p.* 422. *n.* 986.

SAXIFRAGA *tridactylites. Scopoli. Fl. Carniol. p.* 237. *n.* 500.

SEDUM tridactylites tectorum. *Bauhin. Pin.* 285.

PARONYCHIA rutaceo folio. *Gerard. emac.* 624.

PARONYCHIA foliis inciſis. *Parkinſon.* 556.

SAXIFRAGA verna annua humilior. *I. R. H.* 252. *Raii Syn. p.* 354, Rue Witlow-graſs.

Hudſon Fl. Angl. p. 159. *ed.* 2. 182.

Lightfoot Fl. Scot. p. 224.

RADIX annua, fibroſa.

CAULIS plerumque triuncialis, erectus, teres, ruberrimus, ramoſus, pilis glanduliferis veſtitus ut ut folia cum calycibus.

FOLIA ima integra, ſubrotunda, caulina ſicut aſcendunt bipartita, tripartita aut quinquepartita, ſubcarnoſa, rigida, patentia, petiolis foliis longioribus complanatis inſidentia, ſuprema ſeſſilia, bipartita aut ſimplicia, ovato-lanceolata, ſuberecta.

FLORES albi, erecti, parvi.

CALYX: PERIANTHIUM monophyllum, quinquepartitum, breve, laciniis ovato-acutis, ſuberectis, *fig.* 1.

COROLLA: PETALA quinque exigua, laciniis calycis paulo longiora, ovata, obtuſa, patentia, baſi anguſta, immaculata, *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata: ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN inferum, calyce obtectum, ſubrotundum, deſinens in STYLOS duos breves: STIGMATA villoſa, *fig.* 4.

PERICARPIUM: CAPSULA ſubrotunda, bilocularis, biroſtris, ore aperto, ovato, integro.

SEMINA minima, nigricantia.

ROOT annual and fibrous.

STAK generally about three inches high, upright, round, of a bright red colour, branched and covered (as alſo the leaves and calyx) with hairs having glands at their extremities.

LEAVES: the bottom leaves entire and roundiſh; thoſe of the ſtalk as they aſcend, are deeply divided into two, three, or five ſegments, ſomewhat fleſhy, rigid, and ſpreading, ſitting on flattened foot-ſtalks longer than the leaves; the uppermoſt leaves ſeſſile, divided into two ſegments, or intire, of an oval pointed ſhape, and nearly upright.

FLOWERS white, ſmall, and upright.

CALYX: a PERIANTHIUM of one leaf, ſhort, and divided into five ſegments, which are oval, pointed, and upright, *fig.* 1.

COROLLA: five ſmall PETALS, a little longer than the ſegments of the calyx, oval, blunt, and ſpreading, narrowed at bottom, and ſpotleſs, *fig.* 2.

STAMINA: ten FILAMENTS, tapering towards the top: ANTHERÆ roundiſh and yellow, *fig.* 3.

PISTILLUM: GERMEN placed below the calyx and covered by it, of a roundiſh ſhape, and terminating in two ſhort STYLES: the STIGMATA villous, *fig.* 4.

SEED-VESSEL a roundiſh CAPSULE of two cavities and two beaks, the mouth oval, open, and intire.

SEEDS very minute, of a blackiſh brown colour.

IN the months of April and May, this little plant ſucceeds the *Draba verna*, and is no ſmall ornament to the tops of our walls. It grows alſo on houſes, and among rubbiſh.

It varies in ſize from one to ſix inches, or even more in particular ſituations: the larger it grows, the more branched it becomes, and the more numerous are the diviſions of its leaves: on the contrary in its ſmall ſtate, the ſtalk is frequently ſimple, and the leaves undivided.

Its medical virtues, if any, are not ſufficient to preſerve it in the preſent practice.

SAPONARIA OFFICINALIS. SOPEWORT.

SAPONARIA *Linn. Gen. Pl.* DECANDRIA DIGYNIA.
Cal. 1-phyllus, nudus. *Petala* 5, unguiculata. *Caps*, oblonga, 1-locularis.

Raii Syn. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAPONARIA *officinalis*, calycibus cylindricis foliis ovato-lanceolatis. *Lin. Syſt. Vegetab. p.* 347. *Spec. Pl.* 584.

SAPONARIA foliis ovato-lanceolatis, trinerviis; floribus tubuloſis, umbellatis. *Haller hiſt. helv. n.* 980.

LYCHNIS *officinalis*. *Scopoli. Fl. Carniol. p.* 303. *n.* 510.

SAPONARIA major lævis. *Bauhin. pin.* 206.

SAPONARIA *Ger. emac.* 444.

SAPONARIA vulgaris. *Parkinſon.* 641.

LYCHNIS Saponaria dicta. *Raii Syn. p.* 339. Common Sopewort. *Hudſon Fl. Angl. p.* 339. *Oeder. Fl. Dan. icon.* 543.

RADIX perennis, cortice rubente tecta, profunde deſcendens, lateque reptans, gemmis vivacibus inſtructa, hinc tritici repentis æmulus, ex hortis difficillime extirpatur.

CAULES pedales et ultra, erecti, rigidi, teretes, ſubrubentes, geniculati, ſuperne ramoſi, ramis oppoſitis.

FOLIA ovato-lanceolato, connata, brachiatim oppoſita, glabra, trinervia, patentia.

FLORES terminales, ſubumbellati, carnei.

CALYX: PERIANTHIUM monopyllum, tubuloſum, baſi intropreſſum, ſcabriuſculum, oblongum, quinquedentatum, *fig.* 1.

COROLLA: PETALA quinque; *ungues* anguſti, angulati, calyce paulo longiores, *fig.* 3, 4; *limbus* planus, obcordatus, baſi bidentatus, *fig.* 3.

STAMINA: FILAMENTA decem, ſubulata, longitudine tubi corollæ, alterna unguibus petalorum inſerta: ANTHERÆ oblongæ, pallidæ, *fig.* 5.

PISTILLUM: GERMEN oblongum, teretiuſculum, tranſverſe rugoſum, viride: STYLI duo, ſubulati, albi: STIGMATA ſimplicia, *fig.* 6, 7, 8.

PERICARPIUM: CAPSULA oblonga, unilocularis, longitudine calycis, ventricoſa, calyce tecta, ore quadridentato, *fig.* 9.

SEMINA plurima, nigricantia, reniformia, ſuperficie granulatâ, *fig.* 10, 11.

ROOT perennial, covered with a reddiſh coloured bark, ſtriking deep into the ground, and ſpreading wide, furniſhed with living buds, whence, like Couch-Graſs, it is with the greateſt difficulty rooted out of gardens.

STALKS a foot or more in height, upright, rigid, round, of a reddiſh colour, jointed, at top branched, the branches oppoſite.

LEAVES of an oval pointed ſhape, connate, alternately oppoſite, ſmooth, with three ribs, and ſpreading.

FLOWERS terminal, forming a kind of umbell, fleſh coloured.

CALYX: a PERIANTHIUM of one leaf, tubular, preſſed in at the baſe, roughiſh, oblong, with five teeth, *fig.* 1.

COROLLA: five PETALS, the claws narrow, angular, a little longer than the Calyx, *fig.* 3, 4; the *limb* flat, inverſely heart-ſhaped, furniſhed at bottom with two little teeth, *fig.* 3.

STAMINA: ten FILAMENTS, tapering, the length of the tube of the Corolla; the alternate ones inſerted into the claws of the petals: ANTHERÆ oblong, of a pale colour, *fig.* 5.

PISTILLUM: GERMEN oblong, roundiſh, tranverſly wrinkled, and green: STYLES two, tapering, and white; STIGMATA ſimple, *fig.* 6, 7, 8.

SEED-VESSEL: an oblong CAPSULE of one cavity, the length of the Calyx, bellying out, covered with the Calyx; the mouth having four teeth, *fig.* 9.

SEEDS numerous, blackiſh, kidney ſhaped, the ſurface granulated, *fig.* 10, 11.

The name of *Sopewort* has been given to this plant, from its anſwering in a conſiderable degree, the purpoſes of ſoap, forming like it, a lather with water, and taking out ſpots of greaſe, &c. from cloth in the ſame manner; whence it has alſo been called the *Fullers-herb.*

Some botaniſts are ready to doubt whether this herb be a native of Great Britain; but the teſtimonies of GERARD and RAY, appear ſufficient to confirm it as ſuch. Being often cultivated in gardens, on account of its beauty, it is no doubt often found among the *refuſe of gardens*; and the plants which we have here and there met with in a few places about town, may probably have been of this kind.

It is ſaid naturally to grow in moiſt ſituations; and flowers during the months of July, Auguſt and September.

There are ſeveral varieties of it cultivated in the gardens, from the perfectly white to the deep purple bloſſom'd, both ſingle and double; as alſo that ſingular variety the *Saponaria concava anglica* of BAUHINE and MORISON, in which the leaves ſurround the ſtalk, and the bloſſom becomes monopetalous, but generally ſplit, and deſtitute of the other parts of the fructification; found originally by GERARD, in a ſmall grove of a wood called the *Spiney*, near *Lichbarrow*, in *Northamptonſhire*; where, according to the teſtimony of MORTON, *hiſt. nat. agr. North.* it is no longer to be found; and which variety appears more like a luſus naturæ, as RAY conſiders it, than a mule plant, produced betwixt a Gentian and the Sopewort, as LINNÆUS firſt ſuggeſted.

All theſe varieties are eaſily cultivated: indeed much care is required, that they do not ſpread too much in the garden.

A decoction of the dried herb, does not form a lather ſo well as that of the freſh herb. A decoction of the dried root, makes a lather exactly like a ſolution of ſoap, but not ſo ſlippery; *Berg. Mat. Med.*

Greaſe and dirt were waſhed out with it, but not ſtains; *idem.*

The root taſted not bitter, but ſweet; afterwards warm and biting in the throat; *Rutty Mat. Med.*

The taſte of the leaves bitter, mucilaginous, ſlightly auſtere, and acrid, and if chewed long, quite acrid: the decoction alſo bitter, and auſtere; but not changed by vitriol of iron; *idem.*

The watery infuſion of the dried herb, ſuddenly became of a blackiſh green colour, by the addition of vitriol of iron; but not the infuſion of the root; *Bergius.*

In baths and lotions, it has been made uſe of to cleanſe and beautify the ſkin; *idem.*

Internally the decoction of the whole herb is ſudorific, and promotes the menſes; *idem.*

If the decoction be very ſtrong, it proves purgative; *idem, ex Mangeto.*

The leaves and root are made uſe of in the aſthma: half a dram of the root taken with honey, promotes expectoration; *idem.*

In the jaundice, chronic diſeaſes, and obſtructions of the viſcera, it has been recommended by BOERHAVE; *Haller hiſt. helv.*

By others it has been recommended in venereal and ſcrophulous diſeaſes, particularly in the former by STAHL, who deemed it ſuperior to Sarſaparilla; *Newman's Chem. by Lewis.*

Saponaria officinalis

STELLARIA HOLOSTEA. THE GREATER STICHWORT.

STELLARIA *Linnæi Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. 5-phyllus, patens. *Petal.* 5. bipartita. *Caps.* 1-locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

STELLARIA *Holoſtea* foliis lanceolatis ſerrulatis, petalis bifidis. *Lin. Syſt. Vegetab. p.* 352. *Fl. Suecica. p.* 150.

ALSINE foliis gramineis ciliatis. *Haller hiſt. No.* 884.

STELLARIA *Holoſtea. Scopoli Fl. Carniol. p.* 314.

CARYOPHYLLUS holoſteus arvenſis glaber flore majore. *Bauhin pin.* 210.

GRAMEN leucanthemum. *Gerard emac.* 47. *Parkinſon.* 1325. *Raii Syn.* 346, The Greater Stichwort.

Hudſon Fl. Angl. p. 166.

RADIX tenui et infirma radicula, ſummo ceſpite geniculata reptat, demiſſis tamen altius fibris.

ROOT weak, ſlender and jointed, creeps on the ſurface of the ground, ſending down fibres to a conſiderable diſtance.

CAULES plures, denſe naſcuntur, erecti, pedales, quadrati, geniculati, ſcabriuſculi, fragiles, baſi pertenues.

STALKS ſeveral, growing thickly together, upright, a foot high, ſquare, jointed, roughiſh, brittle, very ſlender at bottom.

FOLIA lanceolato-acuminata, ſubconnata, rigidula, inferne carinata, ſerrulata, ſeu potius ſetis rigidiuſculis ciliata, ſuperiora adſcendentia, marginibus revolutis, e cœruleo-vireſcentia, inferiora crebriora, breviora, deorſum flexa, flava.

LEAVES narrow and pointed, at their baſes ſlightly uniting, ſomewhat ſtiff, underneath keel-ſhaped, ſerrated at the edges, or rather edged with very fine ſtiff hairs or briſtles; the upper leaves growing ſomewhat upright, the edges turning back, of a bluiſh green colour; the lower leaves more numerous, ſhorter, bending back, and of a yellow colour.

FLORES albi, longis petiolis ſcabriuſculis inſidentes, e dichotomia caulis prodeuntes.

FLOWERS white, ſtanding on long rough foot-ſtalks, and proceeding from the forked diviſion of the ſtalk.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-lanceolatis, concavis, marginatis, lævibus, patentibus, perſiſtentibus, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, of an oval pointed ſhape, hollow, edged, ſmooth, ſpreading and continuing, *fig.* 1.

COROLLA: PETALA quinque, magna, bipartita, obcordata, alba, nervoſa, baſi vireſcentia, patentia, *fig.* 2.

COROLLA: five white PETALS, large, divided at top, heart-ſhaped, rib'd, green at bottom, ſpreading, *fig.* 2.

STAMINA: FILAMENTA decem, alba, ſubulata, corrollâ breviora, alterna glandulâ flaveſcenti ad baſin inſtructa: ANTHERÆ flavæ, oblongæ, inſidentes, *fig.* 3.

STAMINA: ten white FILAMENTS, tapering, ſhorter than the corolla, the alternate ones furniſhed at bottom with a yellowiſh gland: ANTHERÆ yellow, oblong, fitting on the filaments, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum: STYLI tres, filiformes patentes: STIGMATA obtuſa, *fig.* 4.

PISTILLUM: GERMEN roundiſh: STYLES three, thread-ſhaped, ſpreading: STIGMATA bluntiſh, *fig.* 4.

PERICARPIUM: CAPSULA ſubrotunda, membranacea, unilocularis, ſexvalvis, *fig.* 6.

SEED-VESSEL a roundiſh membranous CAPSULE, of one cavity and ſix valves, *fig.* 6.

SEMINA plerumque quinque aut ſex majuſcula, aurantiaca, reniformia, pulchre crenulata, *fig.* 7.

SEEDS for the moſt part five or ſix, largeiſh, of a deep orange colour and beautifully notched, *fig.* 7.

THE *Stellaria Holoſtea* grows very common with us, and with its white delicate bloſſoms enlivens our woods and banks early in the Summer. Its ſeeds are very beautiful and like the *Chickweed*, but larger.

A very pretty Moth, called by the Aurelians the *leaſt Yellow Underwing*, whoſe hiſtory is unknown, is by them frequently caught hovering over the flowers of this plant when the ſun ſhines ſtrong.

Stellaria Holostea

OXALIS ACETOSELLA. WOOD-SORREL.

OXALIS ACETOSELLA. WOOD-SORREL.

OXALIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* unguibus connexa. *Caps.* angulis dehiſens, 5-gona.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

OXALIS *Acetoſella* ſcapo unifloro, foliis ternatis obcordatis, radice dentata. *Linnæi. Syſt. Vegetab. p.* 360. *Sp. Pl. p.* 620. *Fl. Suecic. n.* 406.

OXYS ſcapo unifloro, foliis ternatis, radice ſquamoſo-articulata. *Haller. hiſt. p.* 402.

OXYS *Acetoſella. Scopoli Fl. Carniol. n.* 561.

TRIFOLIUM acetoſum vulgare. *Bauhin. pin.* 330. *Parkinſon.* 746.

OXYS alba. *Ger. emac.* 1201.

ACETOSELLA et Lujula ſeu Alleluja *Offic.* *Raii Syn. p.* *281, Wood-Sorrel. *Hudſon. Fl. Angl. p.* 173. *Lightfoot. Fl. Scot. p.* 238.

RADIX perennis, horizontalis, ſquamoſo-dentata, ruberrima.

FOLIA terna, obcordata, ex flavo-vireſcentia, ſubtus ſæpe purpurea, pilis raris adſperſa, petiolis longis inſidentia.

PETIOLI palmares, erectiuſculi, teneri, e bulbillo vaginante prodeuntes, ad baſin ruberrimi, teretes, ſuperne ad unum latus ſulcati.

FLORES albi aut carnei, venis rubris eleganter ſtriati.

SCAPI uniflori, longitudine foliorum, bractæis duabus ovato-acutis vaginantibus prope apicem inſtructi.

CALYX: PERIANTHIUM quinquepartitum, breve, perſiſtens, maculis purpureis ſæpe notatum, laciniis obtuſiuſculis margine membranaceis, *fig.* 1.

COROLLA: PETALA quinque, unguibus paululum incurvatis receptaculo affixa, et paulo ſupra ungues cohærentia, obtuſa, ſubcrenata, baſi flavedine tincta, *fig.* 2.

STAMINA: FILAMENTA decem, erecta, alba, quinque exteriora breviora, *fig.* 3, 4: ANTHERÆ flaveſcentes, biloculares, *fig.* 5.

PISTILLUM: GERMEN quinquangulare, viride: STYLI quinque capillares, ſtaminibus paulo longiores: STIGMATA obtuſa, *fig.* 6, 7.

PERICARPIUM: CAPSULA ſubovata, pentagona, maculata, quinquelocularis, angulis longitudinaliter dehiſcentibus, *fig.* 8, 8.

SEMINA: tria in ſingulo loculamento, cordata, per longitudinem ſtriata, utrinque convexa, rufa, ARILLO nitido albo elaſtico incluſa, quo diſrupto ejiciuntur, *fig.* 9, 9.

ROOT perennial, horizontal, ſcaly, and of a bright red colour.

LEAVES growing three together, inverſely heart-ſhaped, of a yellowiſh green colour, frequently purple underneath, beſet with a few hairs, and ſitting on long foot-ſtalks.

LEAF-STALKS about three inches long, nearly upright, tender, proceeding from a little bulb which forms a kind of ſheath to it; at bottom very red and round; the upper part grooved on one ſide.

FLOWERS white or fleſh-coloured, and elegantly ſtreaked with red veins.

FLOWER-STALK, ſupporting a ſingle bloſſom, the length of the leaves, furniſhed near the top with two oval pointed Bracteæ, which partly ſurround it.

CALYX: a PERIANTHIUM deeply divided into five ſegments, ſhort and permanent, often ſpotted with purple; the ſegments bluntiſh, and membranous at the edges, *fig.* 1.

COROLLA: five PETALS, affixed to the receptacle by the claws, which bend a little inward, juſt above the claws adhering together, blunt, ſlightly crenated, and tinged at bottom with yellow, *fig.* 2.

STAMINA: ten FILAMENTS, upright and white, the five exterior ones ſhorteſt, *fig.* 3, 4; ANTHERÆ yellowiſh, and bilocular, *fig.* 5.

PISTILLUM: a GERMEN, four corner'd and green: STYLES five, very ſlender, and a little longer than the Stamina: STIGMATA blunt, *fig.* 6, 7.

SEED-VESSELL: a CAPSULE ſomewhat oval, five cornered, ſpotted, with five cavities, the angles burſting longitudinally, *fig.* 8, 8.

SEEDS: three in each cavity, heart-ſhaped, and grooved longitudinally, convex on both ſides, of a bright reddiſh brown colour, and incloſed within a ſhining white elaſtic ARILLUS, which burſting they are thrown out, *fig.* 9, 9.

IN this little plant, there is a delicacy of ſtructure ſuperior to what we obſerve in moſt: there are ſome circumſtances alſo in the oeconomy of the plant not leſs worthy our attention; and which, I believe, have not hitherto been noticed. The firſt of theſe is the ſame proceſs, with reſpect to the plants ſeeding, which we obſerve in the Violets. If this plant be attentively obſerved, it will be found to continue producing ſeed-veſſels and ſeeds, during the greateſt part of the ſummer, without any appearance of expanded bloſſoms, which are only obſervable at one particular ſeaſon of the year. As ſoon as the plant has done flowering, the flower-ſtalk, as in many other plants, bends down; and when the ſeed is ripe, again becomes upright. The ſecond is, if theſe ſeed-veſſells, when ripe, are ſlightly preſſed, they open at the angles, and the ſeeds are thrown out at the apertures; but not from any elaſticity in the capſule itſelf, which continues unchanged: but the cauſe of their propulſion is a ſtrong white ſhining arillus, which covers the ſeed, and which burſting, by its elaſticity throws the ſeeds to a conſiderable diſtance.

There are but few woods about us in which the *Wood-Sorrel* does not occur. It will not grow in a garden unleſs it has ſhade.

April and May are the months in which it flowers.

It is ſaid to vary with blueiſh and purple-coloured bloſſoms.

The leaves in wet weather, are expanded; but in dry weather they droop; *Linnæi Fl. Suecic.* They are alſo ſaid by ſome authors, to manifeſt a degree of ſenſibility on being ſtruck. Poſſeſſing a very grateful acid taſte, ſuperior to common Sorrel, they have been uſed as an antiſeptic medicine, in malignant fevers, the ſcurvy, and all thoſe diſeaſes in which acids are indicated. The only form at preſent in uſe, is a conſerve of the leaves: but the ſyrup, infuſion, and juice of the leaves, and the leaves themſelves, have been uſed indifferently.

The eſſential ſalt, extracted from it by chryſtallization, is made uſe of for taking out iron moulds and ſpots of ink from linen: for this purpoſe, the ſtained part is dipped in water, ſprinkled with a little of the powdered ſalt, then rubbed on a pewter plate, after which the ſpot is waſhed out with warm water; *Newman's Chem. by Lewis.*

Twenty pounds of freſh Sorrel leaves yielded ſix pounds of juice; from which were obtained two ounces, two drams, and one ſcruple of chryſtalline ſalt; *ibid.*

According to experiments made by Dr. *Lobb*, a piece of human calculus was diſſolved in the juice of this plant in nine days; *Rutty's Mat. Med.*

Oxalis acetosella

Lychnis dioica f.

LYCHNIS DIOICA FLORE RUBRO. RED CAMPION.

LYCHNIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

hæc ſpecies vero dioica eſt.

Cal. 1-phyllus, oblongus, lævis. *Petala* 5 unguiculata. *Limbo* ſubbifido.

Caps. 5-locularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

LYCHNIS *dioica* floribus dioicis. *Linnæi Syſt. Vegetab. p.* 362. *Fl. Suecic. p.* 156. *Sp. Pl. p.* 626.

LYCHNIS floribus ſexu diſtinctis. *Haller. hiſt. n.* 923.

LYCHNIS *dioica. Scopoli Fl. Carniol. n.* 530.

LYCHNIS ſylveſtris ſive aquatica purpurea ſimplex. *Bauhin pin.* 204.

LYCHNIS ſylveſtris flore rubro. *Parkinſon.* 631.

LYCHNIS ſylveſtris rubello flore. *Gerard emac.* 469. *Raii Syn.* 339, Red Flowered Wild Campion.

Hudſon Fl. Angl. 174.

RADIX perennis, minimi digiti craſſitudine, alba, ſapore ſubacri et amaro, fibris multis donato.

CAULES ex una radice plures, erecti, pedales, aut tripedales etiam, teretes, hirſuti, geniculati, purpurei, geniculis incraſſatis, ramoſi, ramis ſuperioribus dichotomis.

FOLIA oppoſita, connata, ovato-acuminata, hirſuta, ſubnervoſa.

CALYX: PERIANTHIUM monophyllum, tubuloſum, hirſutum, ſtriatum, purpureum, quinquedentatum, perſiſtens, *fig.* 1; in femineâ turgidior, *fig.* 2.

COROLLA: PETALA quinque obcordata, purpurea, patentia, *fig.* 3; ad baſin laminæ, unguiculæ obtuſæ, bifidæ aut quadrifidæ, *fig.* 4.

STAMINA: FILAMENTA decem ſubulata, alba, quorum quinque longiora: ANTHERÆ flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: *Nectario* ad baſin cinctum, *fig.* 6: STYLI quinque longi: albi: villoſi: STIGMATA ſimplicia, *fig.* 7.

PERICARPIUM: CAPSULA unilocularis, ore decemdentato, *fig.* 8.

SEMINA plurima, cana, ſcabriuſcula, *fig.* 9.

ROOT perennial, the thickneſs of the little finger, white, of a ſlightly acrid and bitter taſte, furniſhed with numerous fibres.

STALKS ſeveral from one root, upright, from one to three feet high, round, hirſute, jointed, purple, the joints ſwelled, branched, the uppermoſt branches forked.

LEAVES oppoſite, connate, oval-pointed, hirſute, and ſlightly nervous.

CALYX: a PERIANTHIUM of one leaf, tubular, hairy, ſtriated, purple, having five teeth, and continuing, *fig.* 1; in the female more turgid, *fig.* 2.

COROLLA: five purpliſh heart-ſhaped PETALS, ſpreading, *fig.* 3: at the bottom of the lamina or broad part of the petal, are two or four ſmall upright white blunt leaves, or additional petals, *fig.* 4.

STAMINA: ten white tapering FILAMENTS, of which five are longer than the others: ANTHERÆ yellowiſh, *fig.* 5.

PISTILLUM: GERMEN oval, ſurrounded by a *Nectarium* at bottom, *fig.* 6: STYLES five, long and white: STIGMATA ſimple, *fig.* 7.

SEED-VESSEL a CAPSULE of one cavity, the mouth having ten teeth, *fig.* 8.

SEEDS numerous, grey and rough, *fig.* 9.

THE *Lychnis* tribe in general produce both Stamina and Styles in the ſame flower; but in this ſpecies we ſee a remarkable inſtance of the capricious inconſtancy of nature, who ſeems to ſpurn the fetters of ſyſtematic diſtinction, and laughs at mans attempt of ſubjecting her to particular rules; for here the Stamina and Styles grow on ſeparate plants; yet they are placed by LINNÆUS in his Claſs *Decandria.* What could he have done in this caſe? had he placed it under *Monoecia*, he would have ſeparated plants evidently of the ſame genus: ſtill, however, it may be ſaid, he would have made the inveſtigation of the plant eaſier to the botanic ſtudent; nor would it have been the only inſtance where plants nearly ſimilar are diſunited, as in the *Anthoxanthum* and *Holeus*, which evidently belong to the Graſſes, yet are in ſeparate Claſſes.

Excluſive of this ſingular variation with regard to the ſex, there is a no leſs remarkable difference with reſpect to the colour of the flowers in different plants; ſome being conſtantly white and others as conſtantly red: this with ſome other circumſtances relative to the two plants, has led me to ſuſpect that they are not varieties but diſtinct ſpecies: cultivation and farther attention to them, will enable me to ſpeak of this with more certainty.

The red ſort here figured, grows in great abundance in moiſt ſhady ditches and by the ſides of hedges, and ſometimes in woods. It flowers in May and June.

Both the white and red are cultivated when double, and called by the Gardeners about town *Batchelors Buttons*, a name which ſeems with more propriety to belong to ſome of the double flowering *Crowfoots*, as the *Ranunculus acris* and *aconitifolius.*

The Aurelians, or thoſe who collect Inſects of the Moth and Butterfly kind, frequently catch the *Sphinx porcellus*, or *ſmall Elephant Hawk Moth*, on the flowers of this plant in the evening, and where it grows in abundance.

The ſeeds are liable to be eaten within the ſeed-veſſel, in July and Auguſt, by a Caterpillar which produces a *browniſh coloured Moth*, not figured, nor I believe hitherto noticed by any Entomologiſt.

Cerastium semidecandrium

Ceraſtium ſemidecandrum. Leaſt Mouſe-ear Chickweed.

CERASTIUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.
Cal. 5-phyllus. *Petala* bifida. *Caps.* unilocularis, apice dehiſcens.
Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.
CERASTIUM *ſemidecandrum* floribus pentandris, petalis emarginatis. *Lin. Syſt. Vegetab. p.* 362. *Sp. Pl.* 627. *Fl. Suecic. n.* 416.
MYOSOTIS caule ſimplici, foliis ovatis, hirſutis, tubis ternis. *Haller. hiſt. n.* 894.
CENTUNCULUS ſemidecander. *Scopoli. Fl. Carniol. n.* 549.
MYOSOTIS arvenſis hirſuta minor. *Vaillant. tab.* 30. *fig.* 2.
CERASTIUM hirſutum minus parvo flore. *Raii Syn. ed.* 3. *t.* XV. *fig.* 1. *Hudſon. ed.* 2. *p.*200. *Lightf. p.* 241.

RADIX annua, fibroſa, albida.

CAULIS in locis ficciſſimis ſimplex, biuncialis, erectus; ſæpius vero ramoſus, aut pluribus cauliculis compoſitus, ſicut in icone exprimitur; primo vere cauliculi ſupra muros aut terram expanduntur, tandem ſuberecti, triunciales, aut etiam ſemipedales fiunt, colore purpuraſcente, et pilis glanduliferis veſtiti.

FOLIA radicalia oblongo-ovata, prope apicem dilatata, acuta, puncto rufo terminata, baſi anguſtata, connata, leviuſcula, medio per longitudinem ſulcata, caulina ovata, villoſa.

BRACTEÆ duæ, concavæ, viſcoſæ, membranâ marginatæ, ſub ſingulâ dichotomiâ caulis.

FLORES albi, pedunculati, ſubcorymboſi.

PEDUNCULI villoſi, ad baſin paululum incraſſati, floreſcente plantâ longitudine calycis, erecti; peractâ floreſcentiâ deorſum flectuntur, et duplo longiores evadunt, demum eriguntur.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, membranâ acuminatâ Corolla longiore terminatis, viſcoſis, *fig.* 1, 2.

COROLLA: PETALA quinque, oblonga, calyce breviora, apice acutè emarginata, ſæpe eroſa, *fig.* 3, 4.

STAMINA: FILAMENTA plerumque quinque, ſubinde ſex, raro plura, alba, Corollâ breviora: ANTHERÆ ſubrotundæ, flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: STYLI quinque, capillares, albi, villoſi: STIGMATA ſimplicia, *fig.* 6, 7.

PERICARPIUM: CAPSULA membranacea, ſcarioſa, quinquenervis, ore decemdentato, *fig.* 8.

SEMINA plurima, minima, ovata, flaveſcentia, *fig.* 9, 10.

ROOT annual, fibrous, of a whitiſh colour.

STALK in very dry places is ſimple, upright, and about two inches high; but more commonly is branched, or compoſed of numerous ſmall ſtalks, as expreſſed in the figure: theſe early in the ſpring, are expanded on the walls or earth, finally become nearly upright, three inches, or ſometimes even ſix inches high, of a purpliſh colour, and covered with hairs having glands at their extremities.

LEAVES near the root of an oblong oval ſhape, dilated near the top, terminating in a ſharp red point, narrower towards the baſe, and uniting around the ſtalk, nearly ſmooth, and grooved down the middle: thoſe of the ſtalk oval and villous.

FLORAL-LEAVES two, hollow, viſcous, and edged with a membrane, placed under each diviſion of the ſtalk.

FLOWERS white, ſtanding on foot-ſtalks, and forming a kind of Corymbus.

FLOWER-STALKS villous, and thickened a little at bottom, while the plant is in flower the length of the Calyx, and upright, the flowering over they are bent backward, and become twice as long, finally they again become upright.

CALYX: a PERIANTHIUM of five leaves, lanceolate, viſcous, and terminated by a pointed membrane, which is longer than the Corolla, *fig.* 1, 2.

COROLLA: five PETALS, which are oblong, and ſhorter than the Calyx, ſharply cut in at top, and often appearing jagged, *fig.* 3, 4.

STAMINA: FILAMENTS generally five, now and then ſix, ſeldom more, white, ſhorter than the Corolla: ANTHERÆ nearly round, of a yellowiſh colour, *fig.* 5.

PISTILLUM: GERMEN oval: STYLES five, very fine, white, and villous: STIGMATA ſimple, *fig.* 6, 7.

SEED-VESSEL, a membranous CAPSULE, ſonorous when touched, having five ribs, the mouth opening with ten teeth, *fig.* 8.

SEEDS numerous, very minute, oval and yellowiſh, *fig.* 9, 10.

MUCH praiſe is due to the great LINNÆUS, for the accuracy with which he has deſcribed the more common *Ceraſtiums*, and particularly the preſent ſpecies. To Monſieur VAILLANT the public are alſo much indebted, for the accurate and elegant figures, which he has given of them in his *Flora Pariſienſis*.

In the third edition of RAY's *Synopſis*, the *ſemidecandrum* is added by DILLENIUS, who has there given a figure of it, which, although expreſſive of the plant as it commonly grows on heaths, yet tends to miſlead the ſtudent with an idea, that minuteneſs is its chief characteriſtic: the deſcription alſo has a ſimilar tendency. It ſays, that the ſtalks are not viſcous, and that it flowers ſomewhat later than the *viſcoſum*; whereas in both, the ſtalks are evidently viſcous towards the upper part; the *ſemidecandrum* alſo flowers equally early; and inſtead of being leſs branched, as is there aſſerted, it is in a common way more ſo. It is true that both ſpecies, when they grow in very barren places, (and in which this ſpecies ſeems chiefly to have been ſought for,) have only a ſimple ſtalk, and often do not ariſe to the height of two inches.

The *ſemidecandrum* is a much more common plant than is generally imagined; and is diſtinguiſhed, particularly when in bloſſom, from all the other *Ceraſtiums* with the greateſt facility.

There is ſcarce a wall or heath around town, on which this plant may not be found in abundance; particularly about *Hackney*; as alſo under *Greenwich Park Wall*, facing *Black-heath*, as well as on the heath itſelf. It comes into bloſſom ſoon after the *Draba verna*, and, like that plant, ſoon diſappears.

It may be diſtinguiſhed from the *Ceraſtiums*, when in bloſſom, by having only five ſtamina, whence its name. I have ſometimes found more; but this number is ſufficiently conſtant to form a very good ſpecific character. LINNÆUS remarks its having ten ſtamina, five of which produce no Antheræ: theſe I muſt confeſs never to have ſeen. SCOPOLI obſerves, that he always found it with ten ſtamina, and attributes the want of Antheræ in LINNÆUS's five, to the five exterior ones quickly loſing their Antheræ. It is poſſible that in *Carniola*, this plant may occur with ten ſtamina; but here, like the *Alſine*, it certainly loſes one half of them.

The petals form a more invariable character, being always ſhorter than the calyx, acutely cut in at top, as if a piece had been taken out with a pair of ſciſſars, and frequently irregularly jagged or gnawed: they are alſo much broader than thoſe of the *Ceraſtium viſcoſum*.

The calyx too is often of conſiderable uſe in determining this ſpecies, (as it may be obſerved when neither the ſtamina or petals are viſible,) at leaſt from the *vulgatum*, its leaves being very thickly covered with hairs, having glands at their extremities, vid. *fig.* 1, 2. which glands are altogether wanting in the *vulgatum*. The membrane alſo, which terminates the leaves of the calyx, is remarkably long in this ſpecies.

Theſe circumſtances, if attended to, together with the remarks to be hereafter made on the *Ceraſtium vulgatum*, will, it is hoped, enable the ſtudent to inveſtigate theſe plants, and fix them with certainty.

No virtues are attributed to it: and it is too inconſiderable to be noxious in agriculture.

Ceraſtium vulgatum. Common Mouſe-ear-Chickweed.

CERASTIUM *Linnæi. Gen. Pl.* DECANDRIA PENTAGYNIA.

Calyx 5-phyllus. *Petala* bifida. *Caps.* unilocularis, apice dehiſcens.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *vulgatum* foliis oblongo-ovatis, hirſutis, caulibus diffuſis, hirſutie nudâ.

CERASTIUM *vulgatum* foliis ovatis, petalis calyci æqualibus, caulibus diffuſis. *Lin. Syſt. Vegetab. p.* 362. *Sp. Pl. p.* 627. *Fl. Suecic. n.* 415.

MYOSOTIS foliis ovato lanceolatis, petalis calycis longitudine. *Haller. Hiſt. Helv. p.* 390. *n.* 893.

MYOSOTIS arvenſis hirſuta, parvo flore albo. *Vaillant. Paris.* 142. *t.* 30. *f.* 1.

ALSINE hirſuta magno flore. *Bauhin. pin.* 251.

AURICULA muris quorundam flore parvo, vaſculo tenui longo. *I. B.* III. 359.

ALSINE hirſuta myoſotis. *Adv.* 193. *Raii. Syn. p.* 349, Narrow-Leaved Mouſe-ear Chickweed.

Hudſon. Fl. Angl. p. 175. *ed.* 2. *p.* 200.

Ltghtfoot. Fl. Scot. p. 240.

RADIX perennis, fibroſa.

CAULES plurimi, diffuſi, teretes, purpuraſcentes, hirſuti, ramoſi.

FOLIA *hirſuta*, inferiora oblongo-ovata, baſi anguſtata, carinata, connata, ſuperiora ovata, marginibus ſubrevolutis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-lanceolatis, margine membranaceis, apice purpuraſcentibus, hirſutis, *hirſutie nudâ ſive glandulis deſtituta*, *fig.* 1.

COROLLA: PETALA quinque, alba, obtuſe bifida, calyce plerumque longiora, baſi flaveſcentia, *fig.* 2.

STAMINA: FILAMENTA decem, filiformia, corolla breviora; alterna breviora: ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN ovatum: STYLI quinque, capillares, albi, ad baſin ſenſim tenuiores: STIGMATA ſimplicia, *fig.* 4.

PERICARPIUM: CAPSULA ovato-cylindracea, membranacea, paululum recurvata, calyce duplo fere longior, ore decemdentato.

SEMINA plurima, flaveſcentia, ad lentem ſcabriuſcula, *fig.* 5, 6.

ROOT perennial and fibrous.

STALKS numerous, ſpreading, round, purpliſh, hirſute, and branched.

LEAVES *hirſute*; the lowermoſt of an oblong oval ſhape, narrowed at the baſe, midrib projecting on the under ſide, uniting around the ſtalk; the uppermoſt leaves oval, the edges ſomewhat rolled back.

CALYX: a PERIANTHIUM of five leaves, which are oval and pointed, membranous at the edges, and purpliſh at top, *covered with hairs which have no glands at their extremities*, *fig.* 1.

COROLLA: five white PETALS, bluntly notched at top, generally longer than the calyx, yellowiſh at bottom, *fig.* 2.

STAMINA: ten FILAMENTS, thread-ſhaped, and ſhorter than the corolla; the alternate ones ſhorteſt; ANTHERÆ roundiſh, and yellow, *fig.* 3.

PISTILLUM: GERMEN roundiſh: STYLES five, very ſlender and white, gradually leſſening to the bottom: STIGMATA ſimple, *fig.* 4.

SEED-VESSEL: a CAPSULE ovally-cylindrical, membranous, turning up a little, almoſt twice the length of the calyx, the mouth opening with ten teeth.

SEEDS numerous, yellowiſh, appearing roughiſh when magnified, *fig.* 5, 6.

THE *Ceraſtium vulgatum* is often confounded with the two ſpecies already figured in this work; viz. the *viſcoſum* and *ſemidecandrum*. The attentive botaniſt will, however, readily diſtinguiſh it; particularly when aſſiſted by the following obſervations.

Firſt, this ſpecies is certainly perennial; and although it has only a ſmall fibrous root, it continues through the winter, and from the ſame root throws out new ſhoots; while the other two are ſtrictly annual. Secondly, the hairs on the ſtalks, leaves, and calyx, are much longer and coarſer, than in either of the other two; and what particularly deſerves to be noticed, they are not terminated at the extremity by a viſcous globule, a character alone ſufficient to diſtinguiſh it.—And thirdly, it is not only a larger and more ſpreading plant, but alſo with reſpect to ſituation more univerſally common.

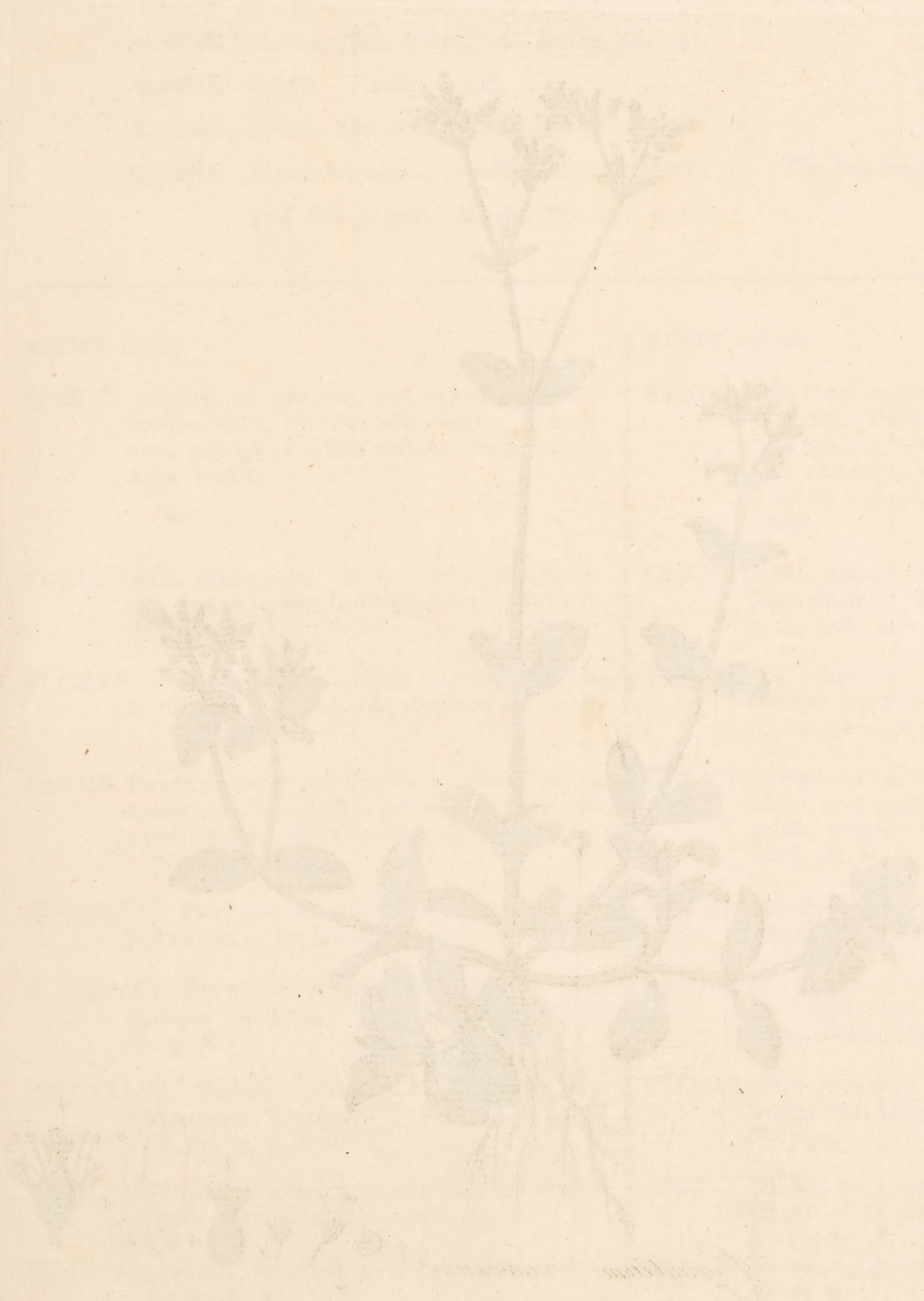
It is ſubject to many variations; ſometimes being very hirſute, at other times but thinly covered with hairs; and it is ſaid to have been found by DOODY quite ſmooth.† It differs in ſize from an inch to two feet. In the breadth of its leaves alſo, like the *Polygonum aviculare*, it varies very conſiderably. The bloſſoms likewiſe are ſubject to vary in ſize. In general, the ſtronger the plant the ſmaller the petals, and vice verſâ; hence by the ſize of its petals alone, it is ſufficiently diſtinguiſhed on heaths, where it frequently grows about two inches in height, and is often taken for the *ſemidecandrum*.

The name given to this plant by Monſieur VAILLANT, is certainly improper; the petals being often twice as large as either of the other two. There is one point alſo in which LINNÆUS's obſervation does not accord with ours: in comparing the leaves with thoſe of the *viſcoſum*, he ſays they are *minus lanceolata magiſque ovata*, the reverſe of which is generally obſervable in our plant.

It comes fully into bloom about May; but may be found in bloſſom during the whole of the ſummer. It grows not only on walls, but alſo by the ſides of roads, in meadows, and among rubbiſh. Like the other *Ceraſtiums*, it is not known to be particularly noxious in agriculture; nor has it any virtues to recommend it.

†*Raii Syn. ed.* 3. *p.* 349.

Cerastium vulgatum



Cerastium viscosum

CERASTIUM VISCOSUM. BROAD-LEAVED MOUSE-EAR CHICKWEED.

CERASTIUM *Linnæi Gen. P.* DECANDRIA PENTAGYNIA.
Cal. 5-phyllus. *Petala* bifida. *Caps.* unilocularis apice dehiſcens.
Rai Syn. Gen. 24. HERBÆ PENTAPETALA VASCULIFERÆ.

CERASTIUM *viſcoſum* erectum villoſo-viſcoſum. *Linnæi Syſt. Vegetab. p.* 362. *Fl. Suecic. n.* 414.
MYOSOTIS hirſuta et viſcoſa. *Haller hiſt. n.* 895.
MYOSOTIS hirſuta altera viſcoſa. *Vaill. Paris.* 142. *t.* 30. *fig.* 1.
ALSINE hirſuta altera viſcoſa. *C. Bauhin. pin.* 251.
ALSINE viſcoſa. *Parkinſon.* 768.
ALSINE hirſuta Myoſotis latifolia præcocior. *Cat. angl.*
ALSINE Myoſotis humilior et rotundo folio. *Merret. pin.* The Broader-leaved Mouſe-ear Chickweed, *Raii Syn. p.* 348. *Hudſon. Fl. Angl. p.* 175.

RADIX annua.

CAULIS palmaris ad pedalem, baſi ramoſus, medius caulis erectus, laterales adſcendentes, dichotomus, pilis glanduliferis veſtitus, unde ſub viſcoſus evadit.

FOLIA ovata, ſubconnata, villoſo-viſcoſa, ad inferiorem partem caulis baſi anguſtiora, e flavo vireſcentia.

FLORES in ſummitatibus caulium plantâ adhuc infantili arcte ſtipantur, ad quindecem aut plures.

CALYX PERIANTHIUM pentaphyllum, foliolis ovato-acuminatis, longitudine petalorum, apice purpuraſcentibus, viſcoſo-piloſis, *fig.* 1.

COROLLA: PETALA quinque alba, oblonga, anguſta, baſi villoſa, apice bifida, *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata, quorum quinque longiora, baſi glandulâ inſtructa, *fig.* 3, 6.

PISTILLUM: GERMEN ovatum: STYLI quinque villoſi germine breviores: STIGMATA obtuſiuſcula, *fig.* 4, 5.

PERICARPIUM: CAPSULA corniformis, ore decemdentato calyce dimidio longiore, *fig.* 7.

SEMINA plurima, flaveſcentia, ſuborbiculata, crenulata, *fig.* 8, 9.

ROOT annual.

STALK from three inches to a foot in height, branched at bottom, the middle ſtalk upright, the ſide ones bending upward, forked at top, covered with numerous hairs, each of which is terminated by a gland, whence it becomes ſlightly viſcid.

LEAVES oval, ſlightly connate, hoary with a little clammineſs, at the bottom of the ſtalk narrower at the baſe, of a yellowiſh green colour.

FLOWERS, while the plant is young, are cloſely crouded together on the tops of the ſtalks to the number of fifteen or more.

CALYX: a PERIANTHIUM of five leaves, which are of an oval pointed ſhape, the length of the petals, purpliſh at top, and covered with viſcid hairs, *fig.* 1.

COROLLA: five white PETALS, oblong, narrow, at bottom villous, bifid at top, *fig.* 2.

STAMINA: ten FILAMENTS, tapering, of which five are longer than the others, and furniſhed at bottom with a ſmall gland, *fig.* 3, 6.

PISTILLUM: GERMEN oval: STYLES five, villous, ſhorter than the germen: STIGMATA bluntiſh, *fig.* 4, 5.

SEED-VESSEL a CAPSULE, horn-ſhaped, twice the length of the calyx, the mouth furniſhed with ten teeth, *fig.* 7.

SEEDS ſeveral, yellowiſh, roundiſh, and notched, *fig.* 8, 9.

AMONG the plants which are with difficulty diſtinguiſhed by the young Botaniſt, we may properly reckon three of our common *Ceraſtiums*, viz. the *viſcoſum*, *vulgatum*, and *ſemidecandrium*, as all of them have ſome ſimilarity in their appearance, occur frequently in the ſame ſituations, and are ſubject to be much altered in their appearance, according to the ſoil and ſituation in which they grow.

The figure which is here given of the *viſcoſum*, repreſents that plant in its medium ſtate; on walls it is found much ſmaller; in meadows it is found much larger; and in both theſe ſituations, as well as on dry banks and ant hills, it occurs very plentifully, and flowers in the months of April and May, being one of the earlieſt in bloom.

It is diſtinguiſhed from the others by the upright manner of its growing, by its broad hoary leaves, the narrowneſs of its petals, and the crouded or cluſtered appearance of its flowers before they blow: its leaves alſo in general are of a paler colour than the reſt.

It is not remarked for any particular uſe; neither is it noxious to the Farmer or Gardener.

LINNÆUS obſerves that the plant is liable to be much disfigured by a ſpecies of *Chermes*.

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N°. 113.

Geum urbanum.

GEUM URBANUM. COMMON AVENS.

GEUM *Linnæi Gen. Pl.* ICOSANDRIA POLYGYNIA.

Cal. 10-fidus. *Petala* 5. *Sem.* ariſta geniculata.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

GEUM *urbanum* floribus erectis, fructibus globoſis villoſis: ariſtis uncinatis nudis, foliis lyratis.

Linnæi Syſt. Vegetab. p. 399. *Sp. Pl. p.* 716. *Fl. Suecic. p.* 179.

GEUM foliis pinnatis, pinna ultima trilobata; floribus patulis, tubis aduncis. *Haller hiſt. n.* 1130.

CARYOPHYLLATA urbana. *Scopoli Fl. Carniol. p.* 364.

CARYOPHYLLATA vulgaris. *Bauhin pin.* 321.

CARYOPHYLLATA *Gerard emac.* 995. *Parkinſon* 136.

Raii Syn. Avens, Herb Bennet.

Hudſon. Fl. Angl. p. 198.

Lightfoot Fl. Scot. p. 273.

RADIX perennis, fibroſa, fuſca, ſapore et odore aromatico Caryophyllorum.

CAULES plures, pedales aut bipedales, ſuberecti, parum flexuoſi, ſubanguloſi, hirſutuli, ramoſi.

FOLIA radicalia admodum variantia, plerumque vero pinnata, petiolata, vagina petiolorum ciliata, pinnâ extimâ magnâ, trilobatâ aut tripartitâ pinnis lateralibus paucis, parvis, inæqualibus, omnibus inciſo-ſerratis, venoſis, hirſutulis, caulina tripartita aut terna.

STIPULÆ duæ, magnæ, ſubrotundæ, foliis ſimiles.

PEDUNCULI ſolitarii, ſuberecti, teretes, hirſutuli.

CALYX: PERIANTHIUM monophyllum, decemfidum, patens, laciniis alternis minimis, acutis, hirſutis, demum reflexis; laciniis majoribus interne villoſis, margine craſſis, *fig.* 1.

COROLLA: PETALA quinque rotunda, flava, longitudine calycis, remota, unguibus breviſſimis, *fig.* 2.

STAMINA: FILAMENTA plurima, flaveſcentia, ſubulata, calyci affixa, primum inflexa, demum erecta: ANTHERÆ ſubrotundæ, flavæ, demum fuſcæ, *fig.* 3, 4.

PISTILLUM: GERMINA numeroſa, in capitulum collecta, piloſa: STYLUS medio geniculatus, apice paululum incraſſato: STIGMA ſimplex, *fig.* 5.

SEMINA numeroſa, compreſſa, hiſpida, Stylo longo geniculato ariſtata, *fig.* 6, receptaculo paleaceo inſidentia, *fig.* 7.

ROOT perennial, fibrous, of a brown colour, with the aromatic taſte and ſmell of Cloves.

STALKS ſeveral, from one to two feet high, nearly upright, a little crooked, ſlightly angular, hairy, and branched.

LEAVES: radical leaves varying very much, moſt commonly pinnated, and ſtanding on a foot-ſtalk, the ſheath of which is edged with hairs, the outermoſt leaf or pinna large, divided a little way down the leaf, or nearly to the baſe; the lateral leaves few, ſmall and unequal, all of them deeply ſerrated, veined, and hairy; the leaves of the ſtalk deeply divided into three ſegments, or entire leaves.

STIPULÆ two, large, of a roundiſh figure like the leaves.

FLOWER-STAKS ſingle, nearly upright, round and hairy.

CALYX: a PERIANTHIUM of one leaf, divided into ten ſegments, and ſpreading; the alternate ſegments very minute, pointed, hirſute, finally turning back; the larger ſegments villous on the inſide, and thick at the edge, *fig.* 1.

COROLLA: five roundiſh yellow PETALS, the length of the Calyx, at a little diſtance from each other, having very ſhort claws, *fig.* 2.

STAMINA: FILAMENTS numerous, of a yellowiſh colour, tapering, affixed to the Calyx, at firſt bending inward, laſtly becoming upright: ANTHERÆ roundiſh, of a yellow colour, finally brown, *fig.* 3, 4.

PISTILLUM: GERMINA numerous, collected into a head, hairy: STYLE jointed in the middle, a little thickened at top: STIGMA ſimple, *fig.* 5.

SEEDS numerous, flattened, hiſpid, terminated by a long Ariſta, crooked near the extremity, *fig.* 6, ſeated on a hairy receptacle, *fig.* 7.

THE *Geum urbanum* is a very common plant with us, in woods and hedges, flowering from May to September.

The root poſſeſſes a degree of aſtringency, joined to an aromatic flavour like that of Cloves, whence its name of *Caryophyllata.*

Infuſed in beer, it renders it more fragrant, and prevents it from ſoon turning ſour; *Linnæi Fl. Suecic.*

Chewed in the mouth, it takes off from a diſagreeable breath; *Rutty. Mat. Med.*

An infuſion of the root in water, given in malignant fevers, has been attended with bad effects, producing delirium: but an infuſion of the root in wine, ſtrengthens the ſtomach and bowels, and is ſerviceable in the diarrhæa and dyſentery, wounds, chronic diſeaſes ariſing from a laxity of fibre, and intermitting fevers; *Haller hiſt. p.* 53. *v.* 2.

The root is ſaid to poſſeſs the moſt virtue when it grows in a dry ſituation.

It is eaten by Kine, Goats, Sheep, and Swine; but not readily by Horſes.

It is diſtinguiſhed from our other *Geum* by its yellow flowers.